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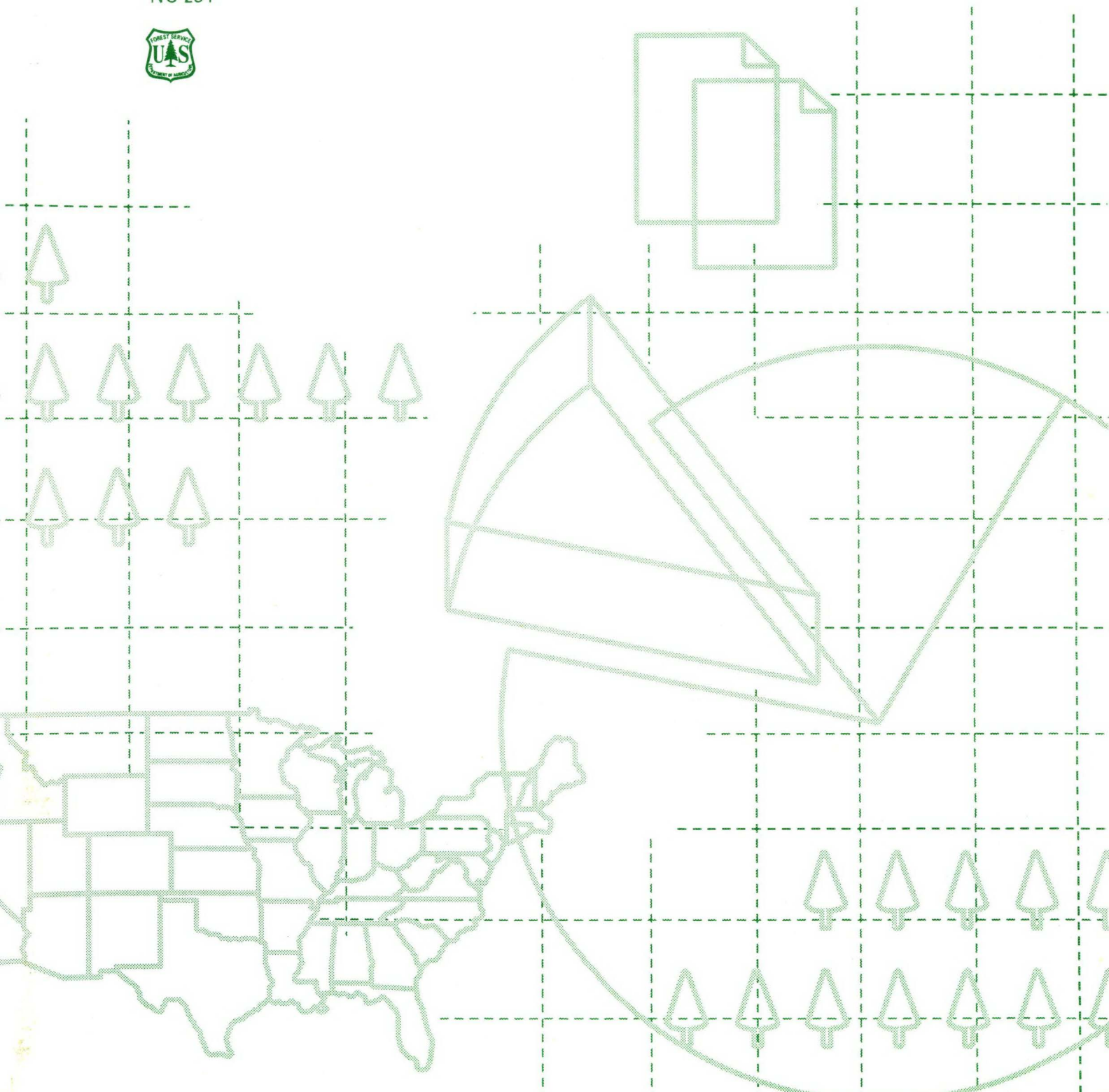
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The 2002 RPA Plot Summary Database Users Manual

Patrick D. Miles, John S. Vissage, and W. Brad Smith



**North Central
Research Station**

USDA Forest Service

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Foreword

Forest Inventory and Analysis (FIA) is a continuing endeavor mandated by Congress in the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 and the McSweeney-McNary Forest Research Act of 1928. FIA's primary objective is to determine the extent, condition, volume, growth, and depletions of timber on the Nation's forest land. RPA reports are generated every 5 years. This manual describes the database used to produce the tables in the report entitled "Forest Resources of the United States, 2002" (Smith *et al.*).

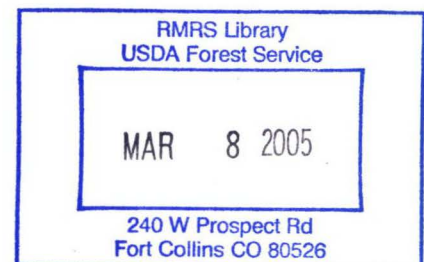


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Chapter 1 – The RPA Database

The original RPA Plot Summary database format was developed in 1987 to meet RPA reporting requirements (Waddell *et al.* 1989). At that time computer resources were at a premium and the cost of data storage was prohibitive. For these and other reasons, data were summarized and stored at the plot level rather than the tree level even though individual tree data existed for most of the forest area of the United States.

Beginning in 1995 the FIA program began collecting tree information on all forest land across the entire Nation. Once tree data are available for all States, the Forest Inventory and Analysis Database (FIADB) will be the primary database for reporting RPA statistics. The FIADB (Miles *et al.* 2001) contains all plot and tree measurements collected by the FIA program — not just data summarized to the plot level. Although the RPA Summary Database is able to report the volume of softwoods, the FIADB, with its tree data, can report the volume of softwoods by individual tree characteristics such as species and diameter class. Although not as flexible as the FIADB, the RPA Plot Summary Database is much easier to work with and is the only format available for exploring long-term trends in the forest resources of the United States.

Data for the 2002 RPA were gathered from several different sources (appendix A). Tree data were available for the 48 coterminous States and southeast Alaska, but not for Hawaii or interior Alaska. Data were collected primarily by FIA units except for some of the lands administered by the National Forest System in California, Colorado, Idaho, Nevada, Oregon, Washington, and Wyoming.

Data in RPA Plot Summary Database format are available through the Internet at <http://www.fia.fs.fed.us>. This is the Internet address for the Forest Inventory and Analysis national program and should remain unchanged for the immediate future. On this page there is a link to “Online databases.” Also available at this Web site will be instructions for obtaining a CD-ROM containing the RPA Plot Summary Database and a Windows™ based program called the RPA Data Wiz. The RPA Data Wiz program allows users to easily generate reports and graphics on the forest resources of the United States.

Chapter 2 provides detailed documentation of the database. Chapter 3 presents algorithms on how to compute estimates of area; current timber volume; biomass; number of trees; average annual growing-stock growth; and mortality. Timber removals estimates for the RPA are derived from timber product output studies (Johnson 2001).

Chapter 2 – Database Structure

There are two tables in the RPA Database (RPA_PLOT2002 and SPDBH_2002). The format of these tables is presented in the following pages. For each column or variable in a table, there is a section that describes the unabbreviated name and other details of the variable. Coded items also include a list of the codes and their meanings.

The RPA_PLOT2002 table provides information about a condition. In 95 percent of cases a sample plot will have one condition. Sample plots will have multiple conditions only when there is a discrete change in one of the following landscape attributes: land use, reserved status, ownership group, forest type, stand-size class, stand origin, and stand density.

Data for the 1987 and 1992 RPA Assessments were submitted in similar formats. Beginning with the 1997 RPA Assessment, data were usually converted to this format from tree-level databases such as the Eastwide (Hansen *et al.* 1992), Westwide (Woudenberg and Farrenkopf 1995), or FIADB. For the 2002 RPA Assessment, all of the data except for interior Alaska and Hawaii were derived from data in FIADB format (see appendix A). Appendix B contains information on state, survey unit, and county codes.

The SPDBH_2002 table contains tree species group volume information summarized at the State level by ownership and diameter classes. This table is used solely to produce reports on species group volumes by State, ownership class, and diameter class. Appendix C contains a listing of the species group names and how they were derived from the FIADB.

Plot Table (Oracle table name is RPAPLOT_2002)

	Column name	Oracle data type	Value or unit of measure	Key data item
1.	PID	NUMBER (8)	Number	
2.	RECNUM	NUMBER (13)	PLOT	X
3.	YEAR	NUMBER (4)	Year (YYYY)	
4.	RSID	NUMBER (2)	Coded	
5.	INVSOURCE	NUMBER(1)	Coded	
6.	SRCDATE	NUMBER (4)	Year (YYYY)	
7.	STATE	NUMBER (2)	Coded	
8.	STATEABB	VARCHAR (2)	Coded	
9.	SUBREGION	NUMBER (1)	Coded	
10.	RPA_REGION	NUMBER (1)	Coded	
11.	RPA_SUBREGION	NUMBER (1)	Coded	
12.	ADMINFOR	NUMBER (2)	Coded	
13.	ADMINFORU	NUMBER (4)	Coded	

(table continued on next page)

Plot Table (Oracle table name is RPAPLOT_2002) continued

	Column name	Oracle data type	Value or unit of measure	Key data item
14.	LANDCC	NUMBER (2)	Coded	
15.	RESERCLASS	NUMBER (1)	Coded	
16.	SPCLASS	NUMBER (2)	Coded	
17.	FORCODE	NUMBER (1)	Coded	
18.	OWNGROUP	NUMBER (2)	Coded	
19.	OWNER	NUMBER (2)	Coded	
20.	AEF	NUMBER (8)	Acres	
21.	VEF	NUMBER (7)	Number	
22.	FORTYPE	NUMBER (3)	Coded	
23.	LOCALTYPE	NUMBER (3)	Coded	
24.	STANDORIGIN	NUMBER (2)	Coded	
25.	SSCLASS	NUMBER (1)	Coded	
26.	STDIAM	NUMBER (5,2)	Coded	
27.	AGECLASS	NUMBER (3)	Years	
28.	STOCKPC	NUMBER (2)	Coded	
30.	LOCALINF01	NUMBER (1)	Coded	
31.	LOCALINF02	NUMBER (1)	Coded	
32.	LOCALINF03	NUMBER (1)	Coded	
33.	LOCALINF04	NUMBER (1)	Coded	
34.	LOCALINF05	NUMBER (1)	Coded	
35.	LOCALINF06	NUMBER (1)	Coded	
36.	BDFTSW	NUMBER (6)	Number	
37.	BDFTHW	NUMBER (6)	Number	
38.	BDFT	NUMBER (6)	Number	
39.	BDFTSW_LOCAL	NUMBER (6)	Number	
40.	BDFTHW_LOCAL	NUMBER (6)	Number	
41.	BDFT_LOCAL	NUMBER (6)	Number	
42.	LOCAL_RULE	NUMBER (2)	Coded	
43.	CUBICSW	NUMBER (5)	Number	
44.	CUBICHW	NUMBER (5)	Number	
45.	CUBIC	NUMBER (5)	Number	
46.	CULLSW	NUMBER (4)	Number	
47.	CULLHW	NUMBER (4)	Name	
48.	CULL	NUMBER (4)	Number	
49.	DEADSW	NUMBER (4)	Number	

(table continued on next page)

Plot Table (Oracle table name is RPAPLOT_2002) *continued*

	Column name	Oracle data type	Value or unit of measure	Key data item
50.	DEADHW	NUMBER (4)	Number	
51.	DEAD	NUMBER (4)	Number	
52.	MORTSW	NUMBER (4)	Number	
53.	MORTHW	NUMBER (4)	Number	
54.	MORT	NUMBER (4)	Number	
55.	GROWTHSW	NUMBER (4)	Number	
56.	GROWTHHW	NUMBER (4)	Number	
57.	GROWTH	NUMBER (4)	Number	
58.	COUNTY	NUMBER (3)	Coded	
59.	CONDITION	NUMBER (1)	Coded	
60.	TSOURCE	NUMBER (2)	Coded	
61.	BIOBOLESW	NUMBER (6)	Number	
62.	BIOBOLEHW	NUMBER (7)	Number	
63.	BIOBOLE	NUMBER (7)	Number	
64.	BIOSAPSSW	NUMBER (6)	Number	
65.	BIOSAPSHW	NUMBER (6)	Number	
66.	BIOSAPS	NUMBER (6)	Number	
67.	BALIVE	NUMBER (9,1)	Number	
68.	LAT	NUMBER (6,2)	Degrees	
69.	LON	NUMBER (6,2)	Degrees	
70.	CONDPROP	NUMBER (5,4)	Number	
71.	FHMHEXID	NUMBER (6)	Coded	
72.	BALIVE_5	NUMBER (9,1)	Number	
73.	TPA_5	NUMBER (9,3)	Number	
74.	DWD	NUMBER (9,3)	Number	
75.	TPA_1	NUMBER (9,3)	Number	
76.	STDIAM_1	NUMBER (5,2)	Number	
77.	ECOSUBCD	VARCHAR2 (6)	Coded	
78.	CONGCD	NUMBER (4)	Coded	
79.	BIOSTUMPTOPSW	NUMBER (6)	Number	
80.	BIOSTUMPTOPHW	NUMBER (7)	Number	
81.	BIOSTUMPTOP	NUMBER (7)	Number	
82.	BIOSALVDEADSW	NUMBER (6)	Number	
83.	BIOSALVDEADHW	NUMBER (6)	Number	
84.	BIOSALVDEAD	NUMBER (6)	Number	

1. **PID** Plot ID. Only used in Hawaii. Used to tie plot back to original field plot data.
2. **RECNUM** Record number. Unique plot identifier. Record numbers for the 48 contiguous States and southeast Alaska were generated by combining State, unit, county, plot, and condition information to form a unique identifier. RECNUM=
(state*100000000000) + (unit*1000000000) + (county*1000000) + (plot*10) + condition.
3. **YEAR** RPA Year. This is set to 2002 for all records in the 2002 RPA plot summary database.
4. **RSID** Region or station identification number. This coded value identifies which of the 16 locations submitted the record.

Code	Region or Station	Code	Region or Station
1	Region 1	9	Region 9
2	Region 2	10	Region 10
3	Region 3	22	Rocky Mountain Research Station
4	Region 4	23	North Central Research Station
5	Region 5	24	Northeastern Research Station
6	Region 6	26	Pacific Northwest Research Station
7	Bureau of Land Management (Oregon)	27	Alaska – PNW Research Station
8	Region 8	33	Southern Research Station

5. **INVSOURCE** Source of the inventory data. A coded value identifying the source of the data. Record sources include variations of original inventory data and inventory data updated by bookkeeping or projection. Code 1 is used for all State inventories in the 2002 RPA except for parts of Alaska and Hawaii.

Code	Description
1	PLOT LEVEL - Original Eastwide/Westwide or FIADB format
2	PLOT LEVEL - Updated Eastwide/Westwide standard format
3	PLOT LEVEL - Original inventory data
4	PLOT LEVEL - Updated inventory data
5	STAND LEVEL - Original inventory data
6	STAND LEVEL - Updated inventory data
7	STRATUM LEVEL - Original inventory data
8	STRATUM LEVEL - Updated inventory data

6. SRCDATE Source date. The year the field plot was measured.

7. STATE State code. The State in which the plot is located.

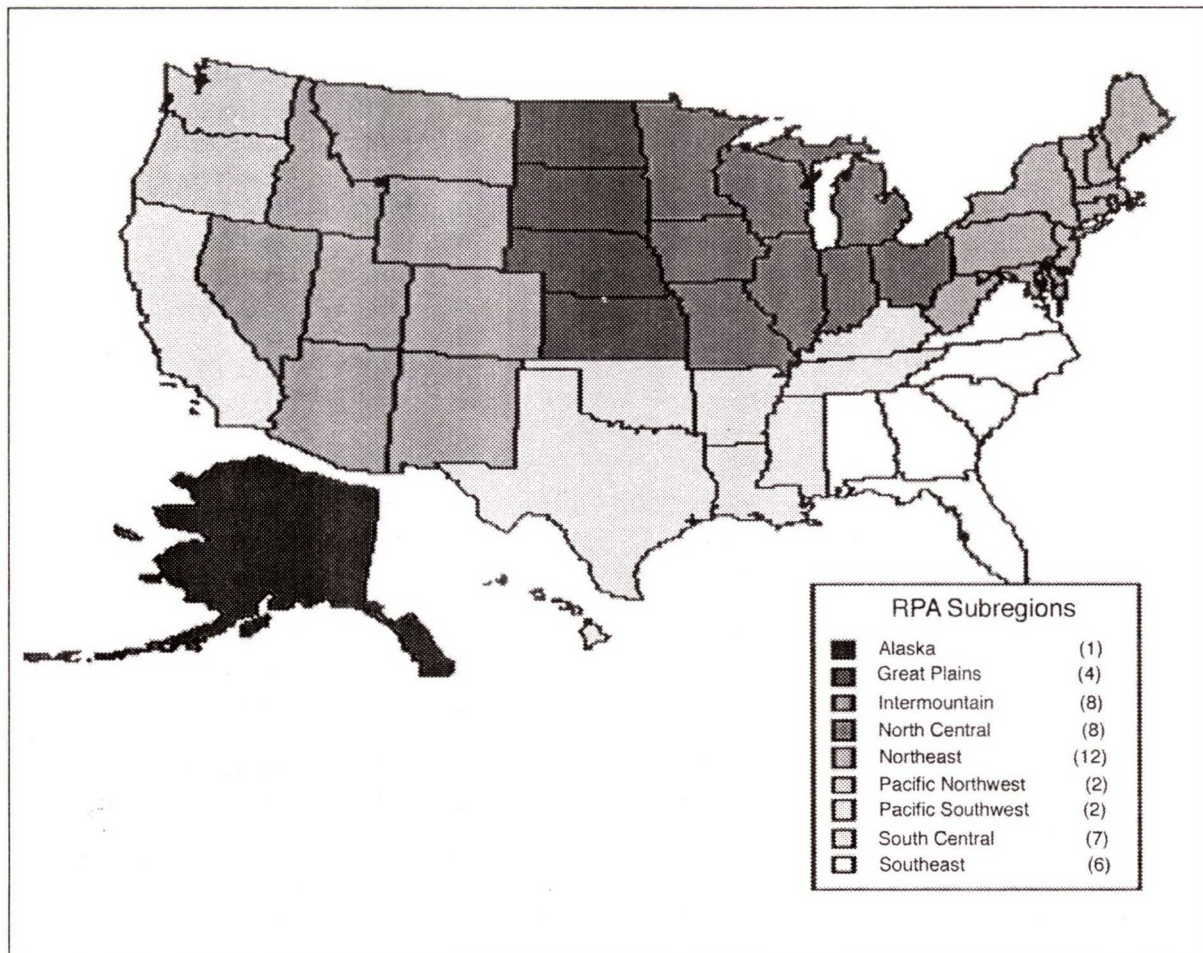
Code	Stateabb	State Name	Code	Stateabb	State Name
01	AL	Alabama	29	MO	Missouri
02	AK	Alaska	30	MT	Montana
04	AZ	Arizona	31	NE	Nebraska
05	AR	Arkansas	32	NV	Nevada
06	CA	California	33	NH	New Hampshire
08	CO	Colorado	34	NJ	New Jersey
09	CT	Connecticut	35	NM	New Mexico
10	DE	Delaware	36	NY	New York
11	DC	District of Columbia	37	NC	North Carolina
12	FL	Florida	38	ND	North Dakota
13	GA	Georgia	39	OH	Ohio
15	HI	Hawaii	40	OK	Oklahoma
16	ID	Idaho	41	OR	Oregon
17	IL	Illinois	42	PA	Pennsylvania
18	IN	Indiana	44	RI	Rhode Island
19	IA	Iowa	45	SC	South Carolina
20	KS	Kansas	46	SD	South Dakota
21	KY	Kentucky	47	TN	Tennessee
22	LA	Louisiana	48	TX	Texas
23	ME	Maine	49	UT	Utah
24	MD	Maryland	50	VT	Vermont
25	MA	Massachusetts	51	VA	Virginia
26	MI	Michigan	53	WA	Washington
27	MN	Minnesota	54	WV	West Virginia
28	MS	Mississippi	55	WI	Wisconsin
			56	WY	Wyoming

8. STATEABB State abbreviation. Two-character identifier for each State (see above).

9. SUBREGION Subregion code. The subregion code is always equal to 1 except in Alaska, Oregon, South Dakota, and Washington where values of 2 (East) and 3 (West) are used.

10. RPA_REGION RPA Region. Grouping of States into four regions (Northern=1, Southern=2, Rocky Mountain=3, and Pacific Coast=4) for reporting purposes (see definition and map for RPA_SUBREGION below)

11. **RPA_SUBREGION** RPA Subregion. Grouping of States into nine subregions for reporting purposes. Subregions 1 and 2 belong in the Northern Region, subregions 3 and 4 belong in the Southern Region, subregions 5 and 6 belong in the Rocky Mountain Region, and Regions 7, 8, and 9 belong in the Pacific Coast Region.



12. ADMINFOR

Administrative forest. A two-digit code identifying the administrative forest within a region where the inventoried land is located.

Region	Adminfor	National Forest Name	Region	Adminfor	National Forest Name
0	00	Non-national forest	3	05	Coronado
1	02	Beaverhead	3	06	Gila
1	03	Bitterroot	3	07	Kaibab
1	04	Idaho Panhandle	3	08	Lincoln
1	05	Clearwater	3	09	Prescott
1	08	Custer	3	10	Santa Fe
1	09	Deerlodge	3	12	Tonto
1	10	Flathead	3	99	Other R3
1	11	Gallatin	4	01	Ashley
1	12	Helena	4	02	Boise
1	14	Kootenai	4	03	Bridger-Teton
1	15	Lewis and Clark	4	05	Caribou
1	16	Lolo	4	06	Challis
1	17	Nez Perce	4	07	Dixie
1	20	Cedar River NGL	4	08	Fishlake
1	21	Little Missouri NGL	4	09	Humboldt
1	22	Sheyenne NGL	4	10	Manti-La Sal
1	24	Grand River NGL	4	12	Payette
1	99	Other R1	4	13	Salmon
2	02	Bighorn	4	14	Sawtooth
2	03	Black Hills	4	15	Targhee
2	04	Grand Mesa- Uncompahgre-Gunnison	4	17	Toiyabe
2	06	Medicine Bow	4	18	Uinta
2	07	Nebraska	4	19	Wasatch-Cache
2	09	Rio Grande	4	20	Desert Range Exp St
2	10	Arapaho-Roosevelt	4	99	Other R4
2	11	Routt	5	01	Angeles
2	12	Pike and San Isabel	5	02	Cleveland
2	13	San Juan	5	03	Eldorado
2	14	Shoshone	5	04	Inyo
2	15	White River	5	05	Klamath
2	17	Cimarron NGL	5	06	Lassen
2	18	Commanche NGL	5	07	Los Padres
2	19	Pawnee NGL	5	08	Mendocino
2	20	Oglala NGL	5	09	Modoc
2	21	Buffalo Gap NGL	5	10	Six Rivers
2	22	Fort Pierre NGL	5	11	Plumas
2	23	Thunder Basin NGL	5	12	San Bernadino
2	99	Other R2	5	13	Sequoia
3	01	Apache-Sitgreaves	5	14	Shasta-Trinity
3	02	Carson	5	15	Sierra
3	03	Cibola	5	16	Stanislaus
3	04	Coconino	5	17	Tahoe
			5	19	Lake Tahoe Basin

(table continued on next page)

Region	Adminfor	National Forest Name	Region	Adminfor	National Forest Name
5	99	Other R5	8	09	Ouachita
6	01	Deschutes	8	10	Ozark and St. Francis
6	02	Fremont	8	11	NFS in North Carolina
6	03	Gifford Pinchot	8	12	Francis Marion-Sumter
6	04	Malheur	8	13	NFS in Texas
6	05	Mt. Baker-Snoqualmie	8	14	Jefferson
6	06	Mt. Hood	8	16	Caribbean
6	07	Ochoco	8	99	Other R8
6	08	Okanogan	9	02	Chequamegon
6	09	Olympic	9	03	Chippewa
6	10	Rogue River	9	04	Huron-Manistee
6	11	Siskiyou	9	05	Mark Twain
6	12	Siuslaw	9	06	Nicolet
6	14	Umatilla	9	07	Ottawa
6	15	Umpqua	9	08	Shawnee
6	16	Wallowa-Whitman	9	09	Superior
6	17	Wenatchee	9	10	Hiawatha
6	18	Willamette	9	11	Hoosier
6	20	Winema	9	18	Wayne
6	21	Colville	9	19	Allegheny
6	99	Other R6	9	20	Green Mountain
8	01	NFS in Alabama	9	21	Monongahela
8	02	Daniel Boone	9	22	White Mountain
8	03	Chattahoochee-Oconee	9	99	Other R9
8	04	Cherokee	10	02	Tongass-Stikine
8	05	NFS in Florida	10	03	Tongass-Chatham
8	06	Kisatchie	10	04	Chugach
8	07	NFS in Mississippi	10	05	Tongass-Ketchikan
8	08	George Washington	10	99	Other R10

13. ADMINFORU

Administrative Unit. A four-digit code identifying the National Forest Service Region/Forest where the inventoried land is located. The first two digits are the region code and the second two digits are the forest code (for codes see ADMINFOR above).

14. LANDCC

Land Use Class. Indicates the basic land cover.

Code	Description
-1	Denied access/hazardous/not in sample.
20	Forest land: Forest land is defined as lands with at least a stocking of 10 (or at least 5 percent cover in chaparral type) of live forest trees of any size, or formerly having such tree cover, and not currently developed for nonforest use. The minimum area for classification of forest land is usually 1 acre with a minimum width of 120 feet stem-to-stem. Forested strips must be at least 120 feet wide for a continuous length of at least 363 feet to meet the acre threshold. Unimproved roads and trails as well as clearings in forest areas are classified as forest if less than 120 feet wide or smaller than 1 acre.
60	Nonforest land: Land that has never supported forests or land formerly forested but now developed for uses such as agriculture (including Christmas tree plantations, orchards, nurseries, and agroforestry), residences, commerce, industry, city parks, or improved roads. If located within forest areas, unimproved roads and nonforested strips must be more than 120 feet wide. Clearings and other openings in a forest area must be more than 1 acre to qualify as nonforest land.
91	Census water: Streams, sloughs, estuaries, and canals more than 200 feet wide, and lakes, reservoirs, and ponds more than 4.5 acres in size (1990 census definition).
92	Noncensus water: Streams, sloughs, estuaries, and canals between 30 and 200 feet, and lakes, reservoirs, and ponds between 1 and 4.5 acres in area. This definition was used in the 1990 census and applied when the data became available. Earlier inventories defined noncensus water differently.

15. RESERCLASS

Reserved class. Reserved land is land withdrawn by law(s) prohibiting the management of the land for wood products.

Code	Description
1	Unreserved forest land: All private forest lands; and public forest lands where the harvest of trees is not prohibited by statute or administrative regulation.
2	Non-National Forest System reserved forest land: Lands that have statutory or administrative restrictions prohibiting the harvest of trees. Examples include forest land within national parks, monuments, national wilderness preservation system areas outside the national forests, State parks.
3	National Forest System reserved forest land/non-wilderness: (Not used in 2002 RPA) In 1997, this code was used to identify all reserved or withdrawn National Forest System forest lands not within the national wilderness preservation system. Examples include primitive areas, scenic research areas, scenic areas, wild and scenic rivers, recreation areas, game refuges, monument areas, and historic areas.
4	National Forest System reserved forest land: National Forest System forest lands that have statutory or administrative restrictions prohibiting the harvest of trees. Examples include land within the national wilderness preservation system or State-designated wilderness areas.

16. SPCLASS

Site productivity class. A classification of forest land in terms of inherent capacity to grow crops of industrial wood. The class identifies the average potential growth in cubic feet/acre/year and is based on the culmination of mean annual increment of fully stocked natural stands.

Code	Description
1	225-999 Cubic feet/acre/year
2	165-224 Cubic feet/acre/year
3	120-164 Cubic feet/acre/year
4	85-119 Cubic feet/acre/year
5	50- 84 Cubic feet/acre/year
6	20- 49 Cubic feet/acre/year
7	< 20 Cubic feet/acre/year
8	Unproductive timberland

17. FORCODE

Forest land code. Used to differentiate between productive/unproductive and reserved/nonreserved forest land.

Code	Description
0	Nonforest
1	Productive non-reserved forest land (Timberland)
2	Productive reserved forest land
3	Unproductive non-reserved forest land
4	Unproductive reserved forest land

18. OWNGROUP

Ownership group. A broad grouping of ownership classes.

Code	Recreation Use
1	National forest land: Federal lands designated by Executive order or statute as national forests or purchase units, and other lands under the administration of the Forest Service including experimental areas and Bankhead-Jones Title III lands.
2	Other public land: Publicly owned lands other than national forest lands.
3	Forest industry land: Lands owned by companies or individuals operating wood-using plants (includes Indian lands if they qualify as industry).
4	Nonindustrial private land: All private lands except those owned by forest industry (includes nonindustrial Indian lands).
5	Unknown ownership: Owner group not recorded.

19. OWNER

Owner class code. Indicates the class in which the landowner (at the time of the inventory) belongs.

Code	Owner
11	National forest
12	Bureau of Land Management. Federal lands administered by the Bureau of Land Management, U.S. Department of the Interior.
14	Other Federal agencies: Federal lands other than lands administered by the Forest Service or BLM.
15	State: Lands owned by State governments, or lands leased by State governmental units for more than 50 years.
16	County and municipal: Lands owned by county or municipal agencies, or lands leased by these agencies for more than 50 years.
20	Forest industry: Lands owned by companies, tribes, or individuals operating wood-using plants.
60	Other private – corporate: Lands owned by private corporations other than forest industry.
70	Other private – individual: Lands owned by individuals, including farmers.
80	Other private-corporate-leased: Lands owned by corporations but leased to forest industry.
90	Other private-individual-leased: Lands owned by individuals but leased to forest industry.
99	Unknown: Ownership not recorded or unavailable. This code is legal for nonforest land and water cover classes only.

20. AEF

Area Expansion Factor. The number of acres the sample plot represents for making current estimates of area. The sum of AEF over all plot records for a particular State will closely match the area reported for that State by the Bureau of Census in 1990.

21. VEF

Volume Expansion Factor. The number of acres the sample plot represents for making current estimates of volume and biomass.

22. FORTYPE

Forest type group. The forest cover type of the inventoried stand, based on the tree species forming a plurality of the stocking within the stand. The first digit of this three-digit code represents either eastern (1) or western (2) type groups. The second and third digits are the historic RPA forest type codes.

Code	Forest Type Group Name	Code	Forest Type Group Name
100	White - red - jack pine	210	Ponderosa pine
110	Spruce - fir	220	Western white pine
120	Longleaf - slash pine	230	Fir - spruce
130	Loblolly - shortleaf pine	240	Hemlock - Sitka spruce
140	Oak - pine	250	Larch
150	Oak - hickory	260	Lodgepole pine
160	Oak - gum - cypress	270	Redwood
170	Elm - ash - cottonwood	280	Other hardwoods
180	Maple - beech - birch	290	Unclassified and other forest types
190	Aspen - birch	293	Pinyon - juniper
198	Other forest types	297	Chaparral
199	Nonstocked	299	Nonstocked
200	Douglas-fir		

23. LOCALTYPE

Local forest type. Available for every State except Hawaii and interior Alaska.

EASTERN FOREST TYPES

100	WHITE-RED-JACK PINE TYPE GROUP	120	LONGLEAF-SLASH PINE TYPE GROUP
101	Jack pine	121	Longleaf pine
102	Red pine	122	Slash pine
103	White pine		
104	White pine - hemlock	130	LOBLOLLY-SHORTLEAF PINE TYPE GROUP
105	Hemlock	131	Loblolly pine
211	Ponderosa pine	132	Shortleaf pine
		133	Virginia pine
110	SPRUCE-FIR TYPE GROUP	134	Sand pine
111	Balsam fir	135	Eastern redcedar
112	Black spruce	136	Pond pine
113	Red spruce - Balsam fir	137	Spruce pine
114	Northern white-cedar	138	Pitch pine
115	Tamarack	139	Table-mountain pine
116	White spruce		

(table continued on next page)

EASTERN FOREST TYPES (continued)

140	OAK-PINE TYPE GROUP	170	ELM-ASH-COTTONWOOD TYPE GROUP
141	White pine - northern red oak - white ash	171	Black ash - American elm - Red maple
142	Eastern redcedar - hardwood	172	River birch - sycamore
143	Longleaf pine - scrub oak	173	Cottonwood
144	Shortleaf pine - oak	174	Willow
145	Virginia pine - southern red oak	175	Sycamore - pecan - American elm
146	Loblolly pine - hardwood	176	Red maple-lowland
147	Slash pine - hardwood	179	Mixed lowland hardwoods
149	Other oak - pine		
150	OAK-HICKORY TYPE GROUP	180	MAPLE-BEECH-BIRCH TYPE GROUP
151	Post oak, black oak or bear oak	181	Sugar maple - beech - yellow birch
152	Chestnut oak	182	Black cherry
153	White oak - red oak - hickory	183	Black walnut
154	White oak	184	Red maple-northern hardwoods
155	Northern red oak	187	Red maple-upland
156	Yellow poplar - white oak - northern red oak	188	Northern hardwood-reverting field
157	Southern scrub oak	189	Mixed northern hardwoods
158	Sweetgum - yellow poplar	190	ASPEN-BIRCH TYPE GROUP
159	Mixed hardwoods	191	Aspen
160	OAK-GUM-CYPRESS TYPE GROUP	192	Paper birch
161	Swamp chestnut oak - cherrybark oak	194	Balsam poplar
162	Sweetgum - Nuttall oak - willow oak	198	OTHER FOREST TYPES
163	Sugarberry - American elm - green ash	199	NONSTOCKED
165	Overcup oak - water hickory		
166	Atlantic white cedar		
167	Baldcypress - water tupelo		
168	Sweetbay - swamp tupelo - red maple		
169	Palm-mangrove-other tropical		

WESTERN FOREST TYPES

200	DOUGLAS-FIR TYPE GROUP	220	WESTERN WHITE PINE TYPE GROUP
201	Douglas-fir	221	Western white pine
202	Douglas-fir - Western hemlock		
203	Port-Orford-cedar - Douglas-fir	230	FIR-SPRUCE TYPE GROUP
210	PONDEROSA PINE TYPE GROUP	116	White spruce (in Alaska)
211	Ponderosa pine	231	White fir and grand fir
212	Jeffrey pine	232	Red fir
213	Ponderosa pine - sugar pine - fir	234	Pacific silver fir - hemlock
		235	Engelmann spruce
		236	Engelmann spruce - subalpine fir

(table continued on next page)

WESTERN FOREST TYPES (continued)

240	HEMLOCK-SITKA SPRUCE TYPE GROUP	290	OTHER FOREST TYPES
241	Western redcedar		(includes Arizona cypress-western juniper)
242	Sitka spruce	112	Black spruce (in Alaska)
247	Mountain hemlock - subalpine fir	291	Coulter pine
248	Western hemlock	292	Digger pine - oak
		294	Knobcone pine
250	LARCH TYPE GROUP	295	Bristlecone pine
255	Larch - Douglas-fir	296	Whitebark pine
256	Grand fir - larch - Douglas-fir	298	Limber pine
257	Ponderosa pine - larch - Douglas-fir		
		293	PINYON-JUNIPER
260	LOGEPOLE PINE TYPE GROUP	297	CHAPARRAL
261	Lodgepole pine	299	NONSTOCKED
270	REDWOOD TYPE GROUP		
271	Redwood		
280	OTHER HARDWOODS TYPE GROUP		
281	Red alder		
282	Poplar - birch		
283	Aspen		
284	California black oak		
285	Cottonwood - willow		
286	Canyon live oak		
287	Oak - Madrone		
288	Other oaks		
289	Ohia		
192	Paper birch		

24. STANDORIGIN Stand origin code. Method of stand regeneration for the trees in the condition. An artificially regenerated stand is established by planting or artificial seeding.

Code	Stand origin
-1	Unknown
1	Natural stands
2	Clear evidence of artificial regeneration

25. SSCLASS

Stand-size class code. Classification of the predominant (based on stocking) diameter class of live trees within the condition. Large diameter trees are at least 11.0 inches diameter for hardwoods and at least 9.0 inches diameter for softwoods. Medium diameter trees are at least 5.0 inches diameter but not as large as large diameter trees. Small diameter trees are less than 5.0 inches diameter. Chaparral communities, land consisting of chaparral with all live stocking less than 10 and at least 5 percent, are considered nonstocked.

Code	Stand-size class
-1	Unknown (only allowed for nontimberland plots)
1	Nonstocked: Forest land with all live stocking less than 10
2	Small diameter: Stands with an all live stocking value of at least 10 (base 100) on which at least 50 percent of the stocking is in small diameter trees
3	Medium diameter: Stands with an all live stocking of at least 10 (base 100); with more than 50 percent of the stocking in medium and large diameter trees; and with the stocking of large diameter trees less than the stocking of medium diameter trees
4	Large diameter: Stands with an all live stocking of at least 10 (base 100); with more than 50 percent of the stocking in medium and large diameter trees; and with the stocking of large diameter trees equal to or greater than the stocking of medium diameter trees

26. STDIAM

Mean stand diameter. Value of the mean stand diameter of the main stand (which is composed of all trees ≥ 5 " d.b.h.). Estimated by calculating the quadratic mean diameter (except for Hawaii and interior Alaska).

27. AGECLASS

Stand age. Average total age, to the nearest year, of the trees (plurality of all live trees not overtopped) in the predominant stand-size class of the condition, determined using local procedures. Age is difficult to measure and therefore stand age may have large measurement errors. Nonstocked stands are recorded as 0. Any inventory dated 1995 or later will contain stand ages recorded to the nearest year. For some older inventories, stand age was recorded in 10- or 20-year classes (CT, DE, KY, MD, NH, PA, RI, VT, and WV) for stands less than 100 years old, 20-year age classes for stands between 100 and 200 years, and 100-year age classes for stands older than 200 years. The value recorded is the midpoint of the age class. Mixed age classes were allowed in older inventories (AR, CT, KY, LA, ME, MA, MS, NH, NY, OH, OK, PA, RI, TX, VT, and WV) and were assigned a value of -999.

28. STOCKPC

Percent stocking class. A coded value indicating the percent stocking class for growing stock in the stand; the 10-percent interval classes range from nonstocked to 100 percent stocking, relative stocking basis. All 10 codes were used for Hawaii and interior Alaska. Only codes 1, 3, 5, 7, 9, and -1 were used for the 48 contiguous States and southeast Alaska (the STOCKPC data for these States came from the GSSTKCD variable in the FIADB, which has fewer classes than STOCKPC). For the 48 contiguous States and southeast Alaska, a code of 1 is equivalent to Nonstocked, 3 Poorly stocked, 5 Medium stocked, 7 Fully stocked, 9 Overstocked, and -1 Data unavailable.

29. TREATOPP

Treatment opportunity class code. Identifies the physical opportunity to improve stand conditions by applying management practices. This variable is mandatory for nonindustrial private timberland but may not be available for other ownerships. No values available for AL, AZ, CO, HI, ID, MT, NM, NV, SC, TN, UT, and WY.

Code	Treatment opportunity class
1	Regeneration without site preparation: The area is characterized by the absence of a manageable stand because of inadequate stocking of growing stock. Growth will be much below the potential for the site if the area is left alone. Prospects are not good for natural regeneration. Artificial regeneration will require little or no site preparation.
2	Regeneration with site preparation: The area is characterized by the absence of a manageable stand because of inadequate stocking of growing stock. Growth will be much below the potential for the site if the area is left alone. Either natural or artificial regeneration will require site preparation.
3	Stand conversion: The area is characterized by stands of undesirable, chronically diseased, or off-site (found where not normally expected) species. Growth and quality will be much below the potential for the site if the area is left alone. The best prospect is to convert the area to a different forest type or species.
4	Thinning seedlings and saplings: The stand is characterized by a dense stocking of growing stock. Stagnation appears likely if left alone. Stocking must be reduced to help crop trees attain dominance.
5	Thinning poletimber: The stand is characterized by a dense stocking of growing stock. Stocking must be reduced to prevent stagnation or to confine growth to selected, high-quality crop trees.
6	Other stocking control: The stand is characterized by an adequate stocking of seedlings, saplings, and poletimber growing stock, mixed with competing vegetation either overtopping or otherwise inhibiting the development of crop trees. The undesirable material must be removed to release overtopped trees, to prevent stagnation, or to improve composition, form, or growth of the residual stand.
7	Other intermediate treatments: The stand would benefit from other special treatments, such as fertilization to improve the growth potential of the site, and pruning to improve the quality of individual crop trees.
8	Clearcut harvest: The area is characterized by a mature or overmature sawtimber stand of sufficient volume to justify a commercial harvest. The best prospect is to harvest the stand and regenerate.

- 9 Partial cut harvest: The stand is characterized by poletimber- or sawtimber-size trees with sufficient merchantable volume for a commercial harvest, which will meet intermediate stand treatment needs or prepare the stand for natural regeneration. The stand is of a favored species composition and may be even- or uneven-aged. Included are such treatments as commercial thinning, seed tree, or shelterwood regeneration, and use of the selection system to maintain an uneven-aged stand.
- 10 Salvage harvest: The stand is characterized by excessive damage to merchantable timber because of fire, insects, disease, wind, ice, or other destructive agents. The best prospect is to remove damaged or threatened material.
- 11 No treatment: No silvicultural treatment is needed.
- 1 Not available/unclassified.
-

30. LOCALINF01 Local info 1. Only used in Hawaii. Class codes of 0 and 7.
31. LOCALINF02 Local info 2. Only used in Hawaii. Class codes of 0 and 9.
32. LOCALINF03 Local info 3. Only used in Hawaii. Class codes of 0, 3, and 7.
33. LOCALINF04 Local info 4. Only used in Hawaii. Class codes of 0, and 8.
34. LOCALINF05 Local info 5. Not used.
35. LOCALINF06 Local info 6. Not used.
36. BDFTSW Softwood board foot volume (International 1/4-inch rule). The net volume/acre (board feet) of softwood growing stock. Trees must be ≥ 9 inches d.b.h. The minimum saw log top is 7 inches diameter outside bark. Available only for timberland plots.
37. BDFTHW Hardwood board foot volume (International 1/4-inch rule). The net volume/acre (board feet) of hardwood growing stock. Trees must be ≥ 11 inches d.b.h. The minimum saw log top is 9 inches diameter outside bark. Available only for timberland plots.

38. **BDFT** Board foot volume (International 1/4-inch rule). The net volume/acre (board feet) of softwood and hardwood growing stock. Available only for timberland plots.
39. **BDFTSW_LOCAL** Softwood board foot volume (local rule). The net volume/acre (board feet) of softwood growing stock. Not used in the 2002 RPA.
40. **BDFTHW_LOCAL** Hardwood board board foot volume (local rule). The net volume/acre (board feet) of softwood growing stock. Not used in the 2002 RPA.
41. **BDFT_LOCAL** Board foot volume (local rule). The net volume/acre (board feet) of softwood and hardwood growing stock. Not used in the 2002 RPA.
42. **LOCAL_RULE** Local Board foot rule. Identifies the rule used for the local volume estimation. Not used in the 2002 RPA.

Code	Local rule
1	Scribner - long log
2	Scribner - short log
3	Doyle
4	International 1/8"
5	local cubic

43. **CUBICSW** Softwood cubic foot volume. Net volume/acre (cubic feet) of softwood growing stock. Trees must be ≥ 5 inches d.b.h., to a minimum 4-inch diameter outside bark. Available for all forest land plots. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land).
44. **CUBICHW** Hardwood cubic foot volume. Net volume/acre (cubic feet) of hardwood growing stock. Trees must be ≥ 5 inches d.b.h., to a minimum 4-inch diameter outside bark. Available for all forest land plots. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land).

45. CUBIC Cubic foot volume. Net volume/acre (cubic feet) of hardwood growing stock. Trees must be ≥ 5 inches d.b.h., to a minimum 4- inch diameter outside bark. Available for all forest land plots. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land).
46. CULLSW Softwood live cull volume. Net volume/acre (cubic feet) of live cull softwood trees; trees must be ≥ 5 inches d.b.h. Available for all forest land plots. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land).
47. CULLHW Hardwood live cull volume. Net volume/acre (cubic feet) of live cull hardwood trees; trees must be ≥ 5 inches d.b.h. Available for all forest land plots. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land).
48. CULL All live cull volume. Net volume/acre (cubic feet) of all live cull trees; trees must be ≥ 5 inches d.b.h. Available for all forest land plots. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land).
49. DEADSW Salvable dead softwood. Net volume/acre (cubic feet) of merchantable sound dead softwood trees – merchantability determined by regional standards. Available for all forest land plots. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land).
50. DEADHW Salvable dead hardwood. Net volume/acre (cubic feet) of merchantable sound dead hardwood trees – merchantability determined by regional standards. Available for all forest land plots. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land).
51. DEAD Salvable dead. Net volume/acre (cubic feet) of merchantable sound dead trees – merchantability determined by regional standards. Available for all forest land plots. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land).

52. MORTSW Softwood mortality. Volume/acre (cubic feet) of annual mortality of softwood growing stock; trees must be ≥ 5 inches d.b.h. Available only for timberland plots.
53. MORTHW Hardwood mortality. Volume/acre (cubic feet) of annual mortality of hardwood growing stock; trees must be ≥ 5 inches d.b.h. Available only for timberland plots.
54. MORT Mortality. Volume/acre (cubic feet) of annual mortality of growing-stock trees; trees must be ≥ 5 inches d.b.h. Available only for timberland plots.
55. GROWTHSW Net annual softwood growth. Net annual growth/acre (cubic feet) of softwood growing stock. Net growth is gross growth minus mortality minus negative cull increment plus positive cull increment. Negative cull increment occurs when growing-stock trees at time zero are reclassified as cull trees at time one. Positive cull increment is when trees classified as cull at time zero are reclassified as growing stock at time one. Available only for timberland plots.
56. GROWTHHW Net annual hardwood growth. Net annual growth/acre (cubic feet) of hardwood growing stock. Net growth is gross growth minus mortality minus negative cull increment plus positive cull increment. Negative cull increment occurs when growing-stock trees at time zero are reclassified as cull trees at time one. Positive cull increment is when trees classified as cull at time zero are reclassified as growing stock at time one. Available only for timberland plots.
57. GROWTH Net annual growth. Net annual growth/acre (cubic feet) of softwood growing stock. Net growth is gross growth minus mortality minus negative cull increment plus positive cull increment. Negative cull increment occurs when growing-stock trees at time zero are reclassified as cull trees at time one. Positive cull increment is when trees classified as cull at time zero are reclassified as growing stock at time one. Available only for timberland plots.
58. COUNTY County code. The identification number for a county, parish, watershed, borough, or similar governmental unit in a State. FIPS codes from the Bureau of the Census, 1990, are used if a single county is represented. See appendix B for specific codes. Note: A county code of 0 was allowed in Alaska, and all of Hawaii was given a county code of 1.

59 CONDITION

Condition number. Unique identifying number assigned to each condition on a plot. Condition is defined by owner group class, reserved status, and land class. Differences in broad forest type, stand size, stand origin, and stand density further define condition for forest land. Mapped nonforest conditions are also assigned numbers. The condition at the center of subplot one is given condition number 1. Other conditions on the plot are assigned numbers sequentially. Once a number has been assigned, the number is reused whenever that same condition is encountered on the plot.

60. TSOURCE

Source of volume data. Identifies whether data source for volume record (trees, stands, etc.) is based on observed or modeled tree d.b.h.

Code Source of volume data

-
- | | |
|---|--|
| 0 | Nonforest land. |
| 1 | Observed from tree data (All timberland plots are based on observed tree data). |
| 2 | Used for unproductive forest land or reserved forest land plots where no tree data were available. Plots with a value of 2 for TSOURCE have imputed values for the following variables: cubic, cubicsw, cubichw, cullsw, cullhw, cull, deadsw, deadhw, dead, biobolesw, biobolehw, biobole, biosapssw, biosapshw, biosaps, balive. These variables were assigned the average values from similar plots (unproductive plots were matched with unproductive plots and reserved plots were matched with reserved plots where the plots had the same first two characters for the ECOSUBCD variable). A minimum of five plots having the same ECOSUBCD string through two characters was required for the plot to be assigned a TSOURCE code of 2. This plot failed the requirements to receive a TSOURCE code of 3. |
| 3 | Used for unproductive forest land or reserved forest land plots where no tree data were available. Plots with a value of 3 for TSOURCE have imputed values for the following variables: cubic, cubicsw, cubichw, cullsw, cullhw, cull, deadsw, deadhw, dead, biobolesw, biobolehw, biobole, biosapssw, biosapshw, biosaps, balive. These variables were assigned the average values from similar plots. (Unproductive plots were matched with unproductive plots and reserved plots were matched with reserved plots where the plots had the same first three characters for the ECOSUBCD variable.) A minimum of five plots having the same ECOSUBCD string through three characters was required for the plot to be assigned a TSOURCE code of 3. This plot failed the requirements to receive a TSOURCE code of 4. |
| 4 | Used for unproductive forest land or reserved forest land plots where no tree data were available. Plots with a value of 4 for TSOURCE have imputed values for the following variables: cubic, cubicsw, cubichw, cullsw, cullhw, cull, deadsw, deadhw, dead, biobolesw, biobolehw, biobole, biosapssw, biosapshw, biosaps, biostumptopsw, biostumptophw, biostumptop, balive. These variables were assigned the average values from similar plots. (Unproductive plots were matched with unproductive plots and reserved plots were matched with reserved plots where the plots had the same first four characters for the ECOSUBCD variable.) A minimum of five plots having the same ECOSUBCD string through four characters was required for the plot to be assigned a TSOURCE code of 4. This plot failed the requirements to receive a TSOURCE code of 5. |
| 5 | Used for unproductive forest land or reserved forest land plots where no tree data were available. Plots with a value of 5 for TSOURCE have imputed values for the following variables: cubic, cubicsw, cubichw, cullsw, cullhw, cull, deadsw, deadhw, dead, biobolesw, biobolehw, biobole, biosapssw, biosapshw, biosaps, balive. These variables were assigned the average |

values from similar plots. (Unproductive plots were matched with unproductive plots and reserved plots were matched with reserved plots where the plots had the same first five characters for the ECOSUBCD variable.) A minimum of five plots having the same ECOSUBCD string through five characters was required for the plot to be assigned a TSOURCE code of 5. This plot failed the requirements to receive a TSOURCE code of 6.

- 6 Used for unproductive forest land or reserved forest land plots where no tree data were available. Plots with a value of 2 for TSOURCE have imputed values for the following variables: cubic, cubicsw, cubichw, cullsw, cullhw, cull, deadsw, deadhw, dead, biobolesw, biobolehw, biobole, biosapssw, biosapshw, biosaps, balive. These variables were assigned the average values from similar plots. (Unproductive plots were matched with unproductive plots and reserved plots were matched with reserved plots where the plots had the same first two characters for the ECOSUBCD variable.) A minimum of five plots having the same ECOSUBCD string through six characters was required for the plot to be assigned a TSOURCE code of 6.
 - 96 Hawaii. Values for variables biosapssw, biosapshw, and biosaps were imputed based on the average ratio of biostumtop to biobole for the lower 48 States. Individual tree data were unavailable for computing trees per acre and basal area variables.
 - 97 Interior Alaska. Values for variables cubic, cubicsw, cubichw, cullsw, cullhw, cull, deadsw, deadhw, dead, biobolesw, biobolehw, biobole, biosapssw, biosapshw, biosaps, and balive were imputed from information contained on six plots measured in the Northwest Territories.
 - 98 Productive reserved plots that did not meet requirements for codes 1 through 6. They received the average values from all other productive reserved plots that were measured in this State or neighboring States (a minimum of five plots was required to develop the average).
 - 99 Unproductive plots that did not meet requirements for codes 1 through 6. They received the average values from all other unproductive plots that were measured in this State or neighboring States (a minimum of five plots was required to develop the average). Exception for Florida (332 plots). Information for these 332 plots was derived from publication by Neal Cost (1982) on unproductive forest land.
-

61. BIOBOLESW

Softwood biomass in the bole. Total gross biomass (including bark) in dry pounds per acre of all live softwood trees 5 inches d.b.h. or larger from a 1-foot stump to a minimum 4-inch top diameter outside bark of the central stem. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forestland). Available for all forest land plots.

62. BIOBOLEHW

Hardwood biomass in the bole. Total gross biomass (including bark) in dry pounds per acre of all live hardwood trees 5 inches d.b.h. or larger from a 1-foot stump to a minimum 4-inch top diameter outside bark of the central stem. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.

63. **BI0BOLE** Biomass in the bole. Total gross biomass (including bark) in dry pounds per acre of all live trees 5 inches d.b.h. or larger from a 1-foot stump to a minimum 4-inch top diameter outside bark of the central stem. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.
64. **BI0SAPSSW** Softwood sapling biomass. Total gross aboveground biomass (including bark) in dry pounds per acre of all live softwood trees from 1 to 5 inches d.b.h., including tops and limbs. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.
65. **BI0SAPSHW** Hardwood sapling biomass. Total gross aboveground biomass (including bark) in dry pounds per acre of all live hardwood trees from 1 to 5 inches d.b.h., including tops and limbs. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.
66. **BI0SAPS** Sapling biomass. Total gross aboveground biomass (including bark) in dry pounds per acre of all live trees from 1 to 5 inches d.b.h., including tops and limbs. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.
67. **BALIVE** Basal area (sq.ft./ac.) of all live trees 1 inch and larger in diameter. Only calculated when TSOURCE=1. Diameters are usually measured at breast height except for certain woodland species where diameters are measured at the root collar. Available for forest land plots.

68. LAT Latitude NAD 83 datum (not available for public distribution due to privacy policy). Due to the Privacy Amendment: H.R.3423 Department of the Interior and Related Agencies Appropriations Act, 2000 (November 17, 1999) latitude and longitude are zeroed out. For internal FIA users the approximate latitude of the plot in decimal degrees to the nearest 100 seconds (0.028 degrees). The precision of this item along the meridian is ± 1542 m at latitude 45 degrees north. A value of -1 means that latitude was not recorded. However, in some cases the county centroid may be entered when the actual location is not available. Actual plot locations cannot be released.
69. LON Longitude NAD 83 datum (not available for public distribution due to privacy policy). Due to the Privacy Amendment: H.R.3423 Department of the Interior and Related Agencies Appropriations Act, 2000 (November 17, 1999) latitude and longitude are zeroed out. For internal FIA users the approximate longitude of the plot in decimal degrees to the nearest 100 seconds (0.028 degrees). The precision of this item along the parallel is ± 1094 m at latitude 45 degrees. A value of -1 means that longitude was not recorded. However, in some cases the county centroid may be entered when the actual location is not available.
70. CONDPROP Condition proportion. Proportion of the plot in the condition. Values of 1 indicate that the plot was not mapped. Values of less than 1 indicate that data for this record came from a mapped portion of a plot.
71. FHMHEXID Forest Health Monitoring hexagon identifier. Number of the hexagon wherein the plot resides. FHM hexagons are approximately 160,000 acres in size.
72. BALIVE_5 Basal area (sq.ft./ac.) of all live trees 5 inches and larger in diameter. Only calculated when TSOURCE=1. Diameters are usually measured at breast height except for certain woodland species where diameters are measured at the root collar.
73. TPA_5 Number of live trees per acre 5 inches in diameter and larger. Only calculated when TSOURCE=1. Diameters are usually measured at breast height except for certain woodland species where diameters are measured at the root collar.
74. DWD Down woody debris. Not populated.

75. TPA_1 Number of live trees per acre 1 inch in diameter and larger. Only calculated when TSOURCE=1. Diameters are usually measured at breast height except for certain woodland species where diameters are measured at the root collar.
76. STDIAM_1 Quadratic mean stand diameter using all live trees over 1 inch in diameter. Only calculated when TSOURCE=1.
77. ECOSUBCD Ecological subsection code. An area of similar surficial geology, lithology, geomorphic process, soil groups, subregional climate, and potential natural communities. Subsection boundaries usually correspond with discrete changes in geomorphology. Subsection information is used for broad planning and assessment. Subsection codes may consist of up to six characters and were developed by the Forest Service as part of the National Hierarchical Framework of Ecological Units.
78. CONGCD Congressional District code for the 107th Congress (2001-2002). A territorial division of a State from which a member of the U.S. House of Representatives is elected. There are 435 congressional districts in the United States apportioned to the States based on population; each State receives at least one congressional district. The Congressional District code assigned to a plot (regardless of when it was measured) is for the most recent Congress. CONGCD is a four-digit number. The first two digits are the State FIPS code and the last two digits are the congressional district number. If a State has only one congressional district, the congressional district number is 00.
79. BIOSTUMPTOPSW Biomass in the stump and tops of live softwood trees 5 inches in diameter and larger. Difference between total dry biomass and merchantable drybiomass on live trees 5 inches in diameter and larger. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forestland). Available for all forest land plots.
80. BIOSTUMPTOPHW Biomass in the stump and tops of live hardwood trees 5 inches in diameter and larger. Difference between total dry biomass and merchantable dry biomass on live trees 5 inches in diameter and larger. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.

81. **BIOSTUMPTOP** Biomass in the stump and tops of live trees 5 inches in diameter and larger. Difference between total dry biomass and merchantable dry biomass on live trees 5 inches in diameter and larger. Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.
82. **BIOSALVDEADSW** Total gross biomass oven-dry weight for salvable dead softwood trees. The total aboveground biomass of a sample tree 5.0 inches in diameter or larger, including all tops and limbs (but excluding foliage). Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.
83. **BIOSALVDEADHW** Total gross biomass oven-dry weight for salvable dead hardwood trees. The total aboveground biomass of a sample tree 5.0 inches in diameter or larger, including all tops and limbs (but excluding foliage). Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.
84. **BIOSALVDEAD** Total gross biomass oven-dry weight for salvable dead trees. The total aboveground biomass of a sample tree 5.0 inches in diameter or larger, including all tops and limbs (but excluding foliage). Values are imputed where the value of the variable TSOURCE is not equal to 1 (TSOURCE may not be equal to 1 for some reserved and unproductive forest land). Available for all forest land plots.

Species Diameter Class Table (Oracle table name is SPDBH2002)

	Column name	Oracle data type	Value or unit of measure	Key data item
1.	SRID	NUMBER		
2.	STATE	NUMBER	Coded	X
3.	STATEABB	VARCHAR2(2)		
4.	RSID	NUMBER	Coded	X
5.	SUBREGION	NUMBER		
6.	RPA_REGION	NUMBER		
7.	RPA_SUBREGION	NUMBER		
8.	YEAR	NUMBER		
9.	OWNGROUP	NUMBER	Coded	X
10.	OWNN	VARCHAR2(16)		
11.	DBHCODE	NUMBER	Coded	X
12.	DCN	VARCHAR2(22)		
13.	NVGSESW	NUMBER		
14.	NVGS LGSL	NUMBER		
15.	NVGS LB SH	NUMBER		
16.	NVGS OTYP	NUMBER		
17.	NVGSEWRD	NUMBER		
18.	NVGS JACK	NUMBER		
19.	NVGSSPFR	NUMBER		
20.	NVGSEHEM	NUMBER		
21.	NVGSCYPR	NUMBER		
22.	NVGSOTESW	NUMBER		
23.	NVBFESW	NUMBER		
24.	NVBFLGSL	NUMBER		
25.	NVBFLB SH	NUMBER		
26.	NVBFOTYP	NUMBER		
27.	NVBFEWRD	NUMBER		
28.	NVBFJACK	NUMBER		
29.	NVBFSPFR	NUMBER		
30.	NVBFEHEM	NUMBER		
31.	NVBFCYPR	NUMBER		
32.	NVBFOTESW	NUMBER		
33.	NVGSEHW	NUMBER		
34.	NVGSSWOK	NUMBER		
35.	NVGSSROK	NUMBER		
36.	NVGSOWOK	NUMBER		
37.	NVGSOROK	NUMBER		
38.	NVGSHICK	NUMBER		
39.	NVGSYBIR	NUMBER		

(table continued on next page)

Species Diameter Class Table (Oracle table name is SPDBH2002)

	Column name	Oracle data type	Value or unit of measure	Key data item
40.	NVGSHMAP	NUMBER		
41.	NVGSSMAP	NUMBER		
42.	NVGSBECH	NUMBER		
43.	NVGSSGUM	NUMBER		
44.	NVGSBGUM	NUMBER		
45.	NVGSASH	NUMBER		
46.	NVGSBASS	NUMBER		
47.	NVGSYPOP	NUMBER		
48.	NVGSECOAS	NUMBER		
49.	NVGSBWAL	NUMBER		
50.	NVGSBCHR	NUMBER		
51.	NVGSOTEHW	NUMBER		
52.	NVBFEHW	NUMBER		
53.	NVBFSWOK	NUMBER		
54.	NVBFSROK	NUMBER		
55.	NVBFOWOK	NUMBER		
56.	NVBFOROK	NUMBER		
57.	NVBFHICK	NUMBER		
58.	NVBFYBIR	NUMBER		
59.	NVBFHMAP	NUMBER		
60.	NVBFSMAP	NUMBER		
61.	NVBFBECH	NUMBER		
62.	NVBFSGUM	NUMBER		
63.	NVBFBGUM	NUMBER		
64.	NVBFASH	NUMBER		
65.	NVFBFASS	NUMBER		
66.	NVBFYPOP	NUMBER		
67.	NVBFECOAS	NUMBER		
68.	NVFBFWAL	NUMBER		
69.	NVFBFCHR	NUMBER		
70.	NVBFOTEHW	NUMBER		
71.	NVGSWSW	NUMBER		
72.	NVGSDOUG	NUMBER		
73.	NVGSPDJEFF	NUMBER		
74.	NVGSFIR	NUMBER		
75.	NVGSWHEM	NUMBER		
76.	NVGSSUGAR	NUMBER		
77.	NVGSWWPN	NUMBER		
78.	NVGSRDWD	NUMBER		

(table continued on next page)

Species Diameter Class Table (Oracle table name is SPDBH2002)

	Column name	Oracle data type	Value or unit of measure	Key data item
79.	NVGSSITKA	NUMBER		
80.	NVGSENGEL	NUMBER		
81.	NVGSWLARCH	NUMBER		
82.	NVGSINCEN	NUMBER		
83.	NVGSLODGE	NUMBER		
84.	NVGSWRCED	NUMBER		
85.	NVGSOTWSW	NUMBER		
86.	NVGSWHW	NUMBER		
87.	NVGSWCOAS	NUMBER		
88.	NVGSALDER	NUMBER		
89.	NVGSWOK	NUMBER		
90.	NVGSOTWHW	NUMBER		
91.	NVBFWSW	NUMBER		
92.	NVBFDOUG	NUMBER		
93.	NVBFPDJEFF	NUMBER		
94.	NVBFfir	NUMBER		
95.	NVBFWHEM	NUMBER		
96.	NVBFSUGAR	NUMBER		
97.	NVBFWWPN	NUMBER		
98.	NVBFRDWD	NUMBER		
99.	NVBFSITKA	NUMBER		
100.	NVBFENGEL	NUMBER		
101.	NVBFWLARCH	NUMBER		
102.	NVBFINCEN	NUMBER		
103.	NVBFLODGE	NUMBER		
104.	NVBFWRCED	NUMBER		
105.	NVBFOTWSW	NUMBER		
106.	NVBFWHW	NUMBER		
107.	NVBFWCOAS	NUMBER		
108.	NVBFALDER	NUMBER		
109.	NVBFWOK	NUMBER		
110.	NVBFOTWHW	NUMBER		

1. SRID Station/Region ID number. Not used.

2. STATE State. The State in which the plot is located. Two-digit FIPS code.

3. STATEABB State abbreviation. Two-character State abbreviation.
4. RSID Region or station identification number. This coded value uniquely identifies each of the 16 locations contributing data to the RPA Database. This ID can be used as a reference key to delete an entire set of data from the aggregated database, to update a particular RSID database, to retrieve a database, or to produce a summary report for individual regions or stations.
5. SUBREGION The subregion code indicates geographic location (east or west) within four States (Alaska, Oregon, South Dakota, and Washington).
6. RPA_REGION RPA Region. Grouping of States into four regions for reporting purposes.
7. RPA_SUBREGION RPA Subregions. Grouping of States into nine subregions for reporting purposes. Subregions 1 and 2 belong in the Northern Region, subregions 3 and 4 belong in the Southern Region, subregions 5 and 6 belong in the Rocky Mountain Region, and Regions 7, 8, and 9 belong in the Pacific Coast Region.
8. YEAR RPA Year. This is set to 2002 for all records in the 2002 RPA plot summary database.
9. OWNGROUP Ownership group. A broad grouping of ownership classes.

Code	Recreation Use
1	National forest land: Federal lands designated by Executive order or statute as national forests or purchase units, and other lands under the administration of the Forest Service including experimental areas and Bankhead-Jones Title III lands.
2	Other public land: Publicly owned lands other than national forest lands.
3	Forest industry land: Lands owned by companies or individuals operating wood-using plants (includes Indian lands if they qualify as industry).
4	Nonindustrial private land: All private lands except those owned by forest industry (includes nonindustrial Indian lands).

1	National forest land: Federal lands designated by Executive order or statute as national forests or purchase units, and other lands under the administration of the Forest Service including experimental areas and Bankhead-Jones Title III lands.
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3	Forest industry land: Lands owned by companies or individuals operating wood-using plants (includes Indian lands if they qualify as industry).
4	Nonindustrial private land: All private lands except those owned by forest industry (includes nonindustrial Indian lands).

10. OWNN Owner name. Not applicable. Value is set to "own_name" for all records.
11. DBHCODE Diameter class code.

DBHcode	Diameter class name
1	5.0-6.9
2	7.0-8.9
3	9.0-10.9
4	11.0-12.9
5	13.0-14.9
6	15.0-16.9
7	17.0-18.9
8	19.0-20.9
9	21.0-28.9
10	29.0+
11	All d.b.h. classes

12. DCN Diameter class name.
13. NVGSESW Net volume growing-stock all eastern softwoods. Includes species groups: NVGSLGSL, NVGSLBSH, NVGSOTYP, NVGSEWRD, NVGSJACK, NVGSSPFR, NVGSEHEM, NVGSCYPR, NVGSOTESW
14. NVGSLGSL Net volume growing-stock longleaf and slash pines.
15. NVGSLBSH Net volume growing-stock loblolly and shortleaf pines.
16. NVGSOTYP Net volume growing-stock other yellow pines.
17. NVGSEWRD Net volume growing-stock white and red pines.
18. NVGSJACK Net volume growing-stock jack pine.
19. NVGSSPFR Net volume growing-stock spruce and balsam fir.
20. NVGSEHEM Net volume growing-stock eastern hemlock.
21. NVGSCYPR Net volume growing-stock cypress.
22. NVGSOTESW Net volume growing-stock other eastern softwoods.
23. NVBFESW Net volume sawtimber all eastern softwoods. Includes species groups: NVBFLGSL, NVBFLBSH, NVBFOTYP, NVBFWRD, NVBFJACK, NVBFSPFR, NVBFHEM, NVBFCYPR, NVBFOTESW

24. NVBFLGSL Net volume sawtimber longleaf and slash pines.
25. NVBFLBSH Net volume sawtimber loblolly and shortleaf pines.
26. NVBFOTYP Net volume sawtimber other yellow pines.
27. NVBFEWRD Net volume sawtimber white and red pines.
28. NVBFJACK Net volume sawtimber jack pine.
29. NVBFSPFR Net volume sawtimber spruce and balsam fir.
30. NVBFEHEM Net volume sawtimber eastern hemlock.
31. NVBFCYPR Net volume sawtimber cypress.
32. NVBFOTESW Net volume sawtimber other eastern softwoods.
33. NVGSEHW Net volume growing-stock all eastern hardwoods. Includes species groups:
NVGSSWOK, NVGSSROK, NVGSOWOK, NVGSOROK, NVGSHICK,
NVGSYBIR, NVGSHMAP, NVGSSMAP, NVGSBECH, NVGSSGUM, NVGSBGUM,
NVGSASH, NVGSBASS, NVGSYPOP, NVGSECOAS, NVGSBWAL, NVGSBCHR,
NVGSOTEHW
34. NVGSSWOK Net volume growing-stock select white oak.
35. NVGSSROK Net volume growing-stock select red oak.
36. NVGSOWOK Net volume growing-stock other white oak.
37. NVGSOROK Net volume growing-stock other red oak.
38. NVGSHICK Net volume growing-stock hickory.
39. NVGSYBIR Net volume growing-stock yellow birch.
40. NVGSHMAP Net volume growing-stock hard maple.
41. NVGSSMAP Net volume growing-stock soft maple.

42. NVGSBECH	Net volume growing-stock beech.
43. NVGSSGUM	Net volume growing-stock sweetgum.
44. NVGSBGUM	Net volume growing-stock tupelo and black gum.
45. NVGSASH	Net volume growing-stock ash.
46. NVGSBASS	Net volume growing-stock basswood.
47. NVGSYPOP	Net volume growing-stock yellow-poplar.
48. NVGSECOAS	Net volume growing-stock cottonwood and aspen.
49. NVGSBWAL	Net volume growing-stock black walnut.
50. NVGSBCHR	Net volume growing-stock black cherry.
51. NVGSOTEHW	Net volume growing-stock other eastern hardwoods.
52. NVBFEHW	Net volume sawtimber all eastern hardwoods. Includes species groups: NVBFSWOK, NVBFSROK, NVBFOWOK, NVBFOROK, NVBFHICK, NVBFYBIR, NVBFHMAP, NVBFSMAP, NVBFBECH, NVBFSGUM, NVBFBGUM, NVBFASH, NVBFBASS, NVBFYPOP, NVBFECOAS, NVBFBWAL, NVBFBCHR, NVBFOTEHW
53. NVBFSWOK	Net volume sawtimber select white oak.
54. NVBFSROK	Net volume sawtimber select red oak.
55. NVBFOWOK	Net volume sawtimber other white oak.
56. NVBFOROK	Net volume sawtimber other red oak.
57. NVBFHICK	Net volume sawtimber hickory.
58. NVBFYBIR	Net volume sawtimber yellow birch.
59. NVBFHMAP	Net volume sawtimber hard maple.

- | | |
|----------------|---|
| 60. NVBFSMAP | Net volume sawtimber soft maple. |
| 61. NVBFBECH | Net volume sawtimber beech. |
| 62. NVBFSGUM | Net volume sawtimber sweetgum. |
| 63. NVBFBGUM | Net volume sawtimber tupelo and black gum. |
| 64. NVBFASH | Net volume sawtimber ash. |
| 65. NVBFBASS | Net volume sawtimber basswood. |
| 66. NVBFYPOP | Net volume sawtimber yellow-poplar. |
| 67. NVBFECOAS | Net volume sawtimber cottonwood and aspen. |
| 68. NVBFBWAL | Net volume sawtimber black walnut. |
| 69. NVBFBCHR | Net volume sawtimber black cherry. |
| 70. NVBFOTEHW | Net volume sawtimber other eastern hardwoods. |
| 71. NVGSSWSW | Net volume growing-stock all western softwoods. Includes species groups:
NVGSDOUG, NVGSPDJEFF, NVGSFIR, NVGSWHEM, NVGSSUGAR,
NVGSWWPN, NVGSRDWD, NVGSSITKA, NVGSENGEL, NVGSLARCH,
NVGSINCEN, NVGSLODGE, NVGSWRCED, NVGSOTWSW |
| 72. NVGSDOUG | Net volume growing-stock Douglas fir. |
| 73. NVGSPDJEFF | Net volume growing-stock ponderosa and Jeffrey pine. |
| 74. NVGSFIR | Net volume growing-stock true fir. |
| 75. NVGSWHEM | Net volume growing-stock western hemlock. |
| 76. NVGSSUGAR | Net volume growing-stock sugar pine. |
| 77. NVGSWWPN | Net volume growing-stock western white pine. |

78. NVGSRDWD	Net volume growing-stock redwood.
79. NVGSSITKA	Net volume growing-stock sitka spruce.
80. NVGSENGEL	Net volume growing-stock Engelmann and other spruces.
81. NVGSLARCH	Net volume growing-stock western larch.
82. NVGSINCEN	Net volume growing-stock incense cedar.
83. NVGSLODGE	Net volume growing-stock lodgepole pine.
84. NVGSWRCED	Net volume growing-stock western red cedar.
85. NVGSOTWSW	Net volume growing-stock other western softwoods.
86. NVGSWHW	Net volume growing-stock all western hardwoods. Includes species groups: NVGSWCOAS, NVGSALDER, NVGSWOK, NVGSOTWHW
87. NVGSWCOAS	Net volume growing-stock cottonwood and aspen.
88. NVGSALDER	Net volume growing-stock red alder.
89. NVGSWOK	Net volume growing-stock oak.
90. NVGSOTWHW	Net volume growing-stock other western hardwoods.
91. NVBFWSW	Net volume sawtimber all western softwoods. Includes species groups: NVBFDOUG, NVBFDPJEFF, NVBFFIR, NVBFWHEM, NVBFSUGAR, NVBFWWPN, NVBFRDWD, NVBFSITKA, NVBFENGEL, NVBFWLARCH, NVBFINCEN, NVBFLODGE, NVBFWRCED, NVBFOTWSW
92. NVBFDOUG	Net volume sawtimber Douglas-fir.
93. NVBFDPJEFF	Net volume sawtimber ponderosa and Jeffrey pine.
94. NVBFFIR	Net volume sawtimber true fir.
95. NVBFWHEM	Net volume sawtimber western hemlock.

96. NVBFSUGAR	Net volume sawtimber sugar pine.
97. NVBFWWP	Net volume sawtimber western white pine.
98. NVBFRDWD	Net volume sawtimber redwood.
99. NVBFSITKA	Net volume sawtimber Sitka spruce.
100. NVBFENGEL	Net volume sawtimber Engelmann and other spruces.
101. NVBFWLARCH	Net volume sawtimber western larch.
102. NVBFINCEN	Net volume sawtimber incense cedar.
103. NVBFLODGE	Net volume sawtimber lodgepole pine.
104. NVBFWRCED	Net volume sawtimber western red cedar.
105. NVBFOTWSW	Net volume sawtimber other western softwoods.
106. NVBFWHW	Net volume sawtimber all western hardwoods. Includes species groups: NVBFWCOAS, NVBFALDER, NVBFWOK, NVBFOTWHW
107. NVBFWCOAS	Net volume sawtimber cottonwood and aspen.
108. NVBFALDER	Net volume sawtimber red alder.
109. NVBFWOK	Net volume sawtimber oak.
110. NVBFOTWHW	Net volume sawtimber other western hardwoods.

Chapter 3 – Algorithms for Summarizing Data

Data in the RPADB were designed for easy use with most database management systems, statistical packages, and other data summary software. Data are typically provided as comma-delimited ASCII files. Database management systems that support hierarchical data structures, as well as those based on the relational model, can easily process RPADB files. Chapter 2 should give the user of almost any software package the information needed to input an RPADB file into a processing system.

The procedures or algorithms used to compute population estimates are provided in tables 1 through 6. Those familiar with the relational data model and the standard Structured Query Language (SQL) database language available in many database management systems will find it easy to load RPADB files into one of these systems and to retrieve information from a loaded database.

ALGORITHMS FOR POPULATION ESTIMATES

All the variables used in these algorithms are defined in Chapter 2.

Table 1. Algorithms for calculating area estimates. Use the RPA_PLOT2002 table.

Units	Type	Calculation	Requirements
Acres	Area of all land and noncensus water	Sum(aef)	landcc in (20,60,92)
Acres	Area of forest land	Sum(aef)	landcc=20
Acres	Area of timberland	Sum(aef)	forcode=1

To calculate the area of all land and noncensus water for the State of Alabama:

Select Sum(aef)

From rpa_plot2002

Where state=1 and landcc in (20,60,92)

To calculate the area of forestland for the State of Alabama:

Select Sum(aef)

From rpa_plot2002

Where state=1 and landcc in (20)

To calculate the area of timberland for the State of Alabama:

Select Sum(aef)

From rpa_plot2002

Where state=1 and landcc in (20) and splclass in (1,2,3,4,5,6) and reserclass=1

or, you could also use the following retrieval to calculate the area of timberland for Alabama:

Select Sum(aef)

From rpa_plot2002

Where state=1 and forcode=1

Table 2. Algorithms for calculating numbers of trees. Use the RPA_PLOT2002 table.

Units	Type	Calculation	Requirements
Trees	Number of all live trees 5 inches and larger on timberland	Sum(vef*tpa_5)	Forcode=1 Note: Not available for Hawaii and interior Alaska.
Trees	Number of all live trees 1 inches and larger on timberland	Sum(vef*tpa_1)	Forcode=1 Note: Not available for Hawaii and interior Alaska.

To calculate the number of all live trees 5 inches d.b.h. and larger on timberland in Minnesota:

Select Sum(vef*tpa_5)

From rpa_plot2002

Where state=27 and forcode=1

To calculate the number of all live trees 1 inch d.b.h. and larger on timberland in Minnesota:

Select Sum(vef*tpa_1)

From rpa_plot2002

Where state=27 and forcode=1

Table 3. Algorithms for calculating volumes. Use the RPA_PLOT2002 table.

Units	Type	Calculation	Requirements
Cuft	Merchantable volume of growing-stock trees on timberland	Sum(vef*cubic)	Forcode=1
Cuft	Merchantable volume of cull trees on timberland	Sum(vef*cull)	Forcode=1
Cuft	Merchantable volume of growing-stock trees on forest land	Sum(vef*cubic)	Landcc=20
Cuft	Merchantable volume of cull trees on forest land	Sum(vef*cull)	Landcc=20
Cuft	All live volume on forest land	Sum(vef*(cubic+cull))	Landcc=20
Cuft	Salvable dead volume on timberland	Sum(vef*dead)	Forcode=1
Bdft	Merchantable volume of sawtimber trees on timberland	Sum(vef*bdft)	Forcode=1

To calculate merchantable volume of growing-stock trees on timberland in Minnesota:

```
Select Sum(vef*cubic)
From rpa_plot2002
Where state=27 and forcode=1
```

To calculate merchantable volume of cull trees on timberland in Minnesota:

```
Select Sum(vef*cull)
From rpa_plot2002
Where state=27 and forcode=1
```

To calculate merchantable volume of growing-stock trees on forest land in Minnesota:

```
Select Sum(vef*cubic)
From rpa_plot2002
Where state=27 and landcc=20
```

To calculate merchantable volume of cull trees on forest land in Minnesota:

```
Select Sum(vef*cull)
From rpa_plot2002
Where state=27 and landcc=20
```

To calculate merchantable volume of sawtimber trees on timberland in Minnesota:

```
Select Sum(vef*bdf)
From rpa_plot2002
Where state=27 and forcode=1
```

Table 4. Algorithms for estimating net average annual growth and average annual mortality. Use the RPA_PLOT2002 table.

Units	Type	Calculation	Requirements
Cuft/year	Net annual merchantable growth of growing-stock trees on timberland	Sum(vef*growth)	
Cuft/year	Annual merchantable mortality of growing-stock trees on timberland	Sum(vef*mort)	

To calculate net annual merchantable growth of growing-stock trees on timberland in Minnesota:

```
Select Sum(vef*growth)
From rpa_plot2002
Where state=27
```

To calculate annual merchantable mortality of growing-stock trees on timberland in Minnesota:

```
Select Sum(vef*mort)
From rpa_plot2002
Where state=27
```

Table 5. Algorithms for estimating biomass. Use the RPA_PLOT2002 table.

Units	Type	Calculation	Requirements
Ovendry lbs.	Gross biomass of all live trees on timberland	Sum(vef*(biobole+biosaps+biostumptop))	Forcode=1
Ovendry lbs.	Merchantable biomass of all live trees on timberland	Sum(vef*biobole)	Forcode=1
Ovendry lbs.	Gross biomass of all live trees on forest land	Sum(vef*(biobole+biosaps+biostumptop))	Landcc=20
Ovendry lbs.	Merchantable biomass of all live trees on forest land	Sum(vef*biobole)	Landcc=20

To calculate aboveground gross biomass of all live trees (excluding foliage) on timberland in Minnesota:

```
Select Sum(vef*(biobole+biosaps+biostumptop))
From rpa_plot2002
Where state=27 and forcode=1
```

To calculate aboveground merchantable biomass of all live trees (excluding foliage) on timberland in Minnesota:

```
Select Sum(vef*(biobole))
From rpa_plot2002
Where state=27 and forcode=1
```

To calculate aboveground gross biomass of all live trees (excluding foliage) on forest land in Minnesota:

```
Select Sum(vef*(biobole+biosaps+biostumptop))
From rpa_plot2002
Where state=27 and landcc=20
```

To calculate aboveground merchantable biomass of all live trees (excluding foliage) on forest land in Minnesota:

```
Select Sum(vef*(biobole))
From rpa_plot2002
Where state=27 and landcc=20
```

Table 6. Algorithms for estimating growing-stock volumes on timberland by species group and diameter class. Uses the SPDBH2002 Table.

Units	Type	Calculation	Requirements
Cuft	Merchantable volume of growing-stock trees on timberland	Sum(NVGSESW+ NVGSEHW+ NVGSWSW+ NVGSWHW)	Dbhcode<11
Bdft	Merchantable volume of sawtimber trees on timberland	Sum(NVBFESW+ NVBFEHW+ NVBFWSW+ NVBFWHW)	Dbhcode<11
Cuft	Merchantable volume of longleaf and slash pine growing-stock trees from 5 to 6.9 inches d.b.h. on national forest timberland	Sum (NVGSLGSL)	Dbhcode=1 and Owngroup=1
Bdft	Merchantable volume of longleaf and slash pine sawtimber trees from 11 to 12.9 inches d.b.h. on national forest timberland	Sum (NVBFLGSL)	Dbhcode=4 and Owngroup=1

To calculate merchantable volume of growing-stock trees on timberland in Minnesota:

Select Sum(NVGSESW+NVGSEHW+NVGSWSW+NVGSWHW)

From SPDBH2002

Where state=27 and Dbhcode<>11

To calculate merchantable volume of sawtimber trees on timberland in Minnesota:

Select Sum(NVBFESW+NVBFEHW+NVBFWSW+NVBFWHW)

From SPDBH2002

Where state=27 and Dbhcode<>11

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Appendix A

SOURCES OF 2002 RPA DATA

State	Year	Format	Submitting Unit
Alabama	2000	FIADB	Southern Research Station
Alaska	1998	FIADB/RPADB	FIADB 31 million acres of forest land in southeast Alaska were measured by the Pacific Northwest FIA; RPA Summary DB format 96 million acres of interior Alaska
Arizona	1999	FIADB	Rocky Mountain Research Station
Arkansas	1995	FIADB	Southern Research Station
California	1994	FIADB	8.1 million acres of forest land were measured by the Pacific Northwest FIA; Region 5 measured 9.6 million acres; and Region 6 measured 0.6 million acres.
Colorado	1983	FIADB	6.2 million acres of forest land were measured by the Rocky Mountain FIA; Region 2 measured 5.5 million acres
Connecticut	1998	FIADB	Northeastern Research Station
Delaware	1999	FIADB	Northeastern Research Station
District of Columbia	2002	FIADB	Southern Research Station
Florida	1995	FIADB	Southern Research Station
Georgia	1997	FIADB	Southern Research Station
Hawaii		RPADB	Pacific Northwest Research Station
Idaho	1991	FIADB	Rocky Mountain Research Station
Illinois	1998	FIADB	North Central Research Station
Indiana	1998	FIADB	North Central Research Station
Iowa	1990	FIADB	North Central Research Station
Kansas	1994	FIADB	North Central Research Station
Kentucky	1988	FIADB	Southern Research Station
Louisiana	1991	FIADB	Southern Research Station
Maine	1995	FIADB	Northeastern Research Station
Maryland	1999	FIADB	Northeastern Research Station
Massachusetts	1998	FIADB	Northeastern Research Station
Michigan	1993	FIADB	North Central Research Station
Minnesota	1990	FIADB	North Central Research Station
Mississippi	1994	FIADB	Southern Research Station
Missouri	1989	FIADB	North Central Research Station
Montana	1989	FIADB	Rocky Mountain Research Station
Nebraska	1994	FIADB	North Central Research Station

(table continued on next page)

State	Year	Format	Submitting Unit
Nevada	1989	FIADB	Rocky Mountain Research Station
New Hampshire	1997	FIADB	Northeastern Research Station
New Jersey	1999	FIADB	Northeastern Research Station
New Mexico	1999	FIADB	Rocky Mountain Research Station
New York	1993	FIADB	Northeastern Research Station
North Carolina	1990	FIADB	Southern Research Station
North Dakota	1995	FIADB	North Central Research Station
Ohio	1993	FIADB	Northeastern Research Station
Oklahoma	1993	FIADB	Southern Research Station
Oregon	1992	FIADB	9.8 million acres of forest land measured by the Pacific Northwest FIA; 14.0 million were measured by Region 6
Pennsylvania	1989	FIADB	Northeastern Research Station
Rhode Island	1998	FIADB	Northeastern Research Station
South Carolina	2000	FIADB	Southern Research Station
South Dakota	1995	FIADB	0.6 million acres of forest land were measured by the North Central FIA (1995); 1.0 million acres by the Rocky Mountain FIA
Tennessee	1999	FIADB	Southern Research Station
Texas	1992	FIADB	Southeast and northeast Texas were inventoried by the Southern FIA; West Texas was estimated using remotely sensed data (AVHRR)
Utah	1995	FIADB	Rocky Mountain Research Station
Vermont	1997	FIADB	Northeastern Research Station
Virginia	1992	FIADB	Southern Research Station
Washington	1991	FIADB	11.4 million acres of forest land were measured by the Pacific Northwest FIA; 5.9 million acres were measured by Region 6
West Virginia	1989	FIADB	Northeastern Research Station
Wisconsin	1996	FIADB	North Central Research Station
Wyoming	1984	FIADB	5.1 million acres of forest land were measured by the Rocky Mountain FIA; 0.6 million acres were measured by Region 2

Addresses of USDA Forest Service Research Stations with responsibilities for forest inventories in the United States and their area of responsibility

Address	Area of responsibility
Northeastern Research Station 11 Campus Boulevard Newtown Square, PA 19073	Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and West Virginia
North Central Research Station 1992 Folwell Avenue St. Paul, MN 55108	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin
Southern Research Station 4700 Old Kingston Pike. Knoxville, TN 37919	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and Puerto Rico
Pacific Northwest Research Station Forestry Sciences Laboratory 620 SW Main, Suite 400 Portland, OR 97205	Alaska, California, Hawaii, Oregon, and Washington
Rocky Mountain Research Station Forestry Sciences Laboratory 507 25th Street Ogden UT 84401	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming

Addresses of National Forest System Regional Offices in the United States

Address	Region	Location of national forests
Forest Service, USDA Northern Region Federal Building 200 E. Broadway PO Box 7669 Missoula, MT 59807	Region 1	Montana, northern Idaho, North Dakota, and northwestern South Dakota
Forest Service, USDA Rocky Mountain Region 740 Simms St P.O. Box 25127 Lakewood, CO 80225-0127	Region 2	Colorado, Kansas, Nebraska, South Dakota, and eastern Wyoming
Forest Service, USDA Southwestern Region 333 Broadway SE Albuquerque, NM 87102	Region 3	Arizona and New Mexico
Forest Service, USDA Intermountain Region Federal Building 324 25th Street Ogden, UT 84401	Region 4	Southern Idaho, Nevada, Utah, and western Wyoming

Forest Service, USDA Pacific Southwest Region 1323 Club Drive Vallejo, CA 94592	Region 5	California
Forest Service, USDA Pacific Northwest Region 333 S.W. 1st Avenue P.O. Box 3623 Portland, OR 97208	Region 6	Oregon and Washington
Forest Service, USDA Southern Region 1720 Peachtree Road, N.W. Atlanta, GA 30309	Region 8	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Tennessee, Texas, Virginia, West Virginia, and Puerto Rico
Forest Service, USDA Eastern Region 310 West Wisconsin Avenue, Suite 500 Milwaukee, WI 53203	Region 9	Connecticut, Delaware, Illinois, Indiana, Iowa Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin
Forest Service, USDA Alaska Region P.O. Box 21628 Juneau, AK 99802-1628	Region 10	Alaska

For additional information, contact the Internet sites for the regional offices through the USDA Forest Service home page: <http://www.fs.fed.us>. The forest management staff in each regional office manages timber inventories conducted by the region.

Appendix B – State, Survey Unit, and County Codes

01	Alabama	05	North Central	201	Prince of Wales-Outer Ketchikan Census Area
01	Southwest-South	009	Blount	220	Sitka Borough
003	Baldwin	015	Calhoun	231	Skagway-Yakutat-Angoon Census Area
039	Covington	019	Cherokee	240	Southeast Fairbanks Census Area
053	Escambia	027	Clay	261	Valdez-Cordova Census Area
097	Mobile	029	Cleburne	270	Wade Hampton Census Area
129	Washington	037	Coosa	280	Wrangell-Petersburg Census Area
		043	Cullman	290	Yukon-Koyukuk Census Area
02	Southwest-North	055	Etowah		
023	Choctaw	073	Jefferson		
025	Clarke	111	Randolph		
035	Conecuh	115	St. Clair		
091	Marengo	117	Shelby		
099	Monroe	121	Talladega		
119	Sumter	127	Walker		
131	Wilcox	133	Winston		
				04	Arizona
03	Southeast	06	North	01	Southern
001	Autauga	033	Colbert	003	Cochise
005	Barbour	049	DeKalb	009	Graham
011	Bullock	059	Franklin	011	Greenlee
013	Butler	071	Jackson	012	La Paz
017	Chambers	077	Lauderdale	013	Maricopa
021	Chilton	079	Lawrence	019	Pima
031	Coffee	083	Limestone	021	Pinal
041	Crenshaw	089	Madison	023	Santa Cruz
045	Dale	095	Marshall	027	Yuma
047	Dallas	103	Morgan		
051	Elmore			02	Northern
061	Geneva	02	Alaska	001	Apache
067	Henry	01	Alaska	005	Coconino
069	Houston	013	Aleutians East Borough	007	Gila
081	Lee	016	Aleutians West Census Area	015	Mohave
085	Lowndes	020	Anchorage Borough	017	Navajo
087	Macon	050	Bethel Census Area	025	Yavapai
101	Montgomery	060	Bristol Bay Borough		
109	Pike	070	Dillingham Census Area	05	Arkansas
113	Russell	090	Fairbanks North Star Borough	01	South Delta
123	Tallapoosa	100	Haines Borough	001	Arkansas
		110	Juneau Borough	017	Chicot
04	West Central	122	Kenai Peninsula Borough	041	Desha
007	Bibb	130	Ketchikan Gateway Borough	069	Jefferson
057	Fayette	150	Kodiak Island Borough	077	Lee
063	Greene	164	Lake and Peninsula Borough	079	Lincoln
065	Hale	170	Matanuska-Susitna Borough	085	Lonoke
075	Lamar	180	Nome Census Area	095	Monroe
093	Marion	185	North Slope Borough	107	Phillips
105	Perry	188	Northwest Arctic Borough	117	Prairie
107	Pickens				
125	Tuscaloosa				

02 North Delta

021 Clay
031 Craighead
035 Crittenden
037 Cross
055 Greene
067 Jackson
075 Lawrence
093 Mississippi
111 Poinsett
123 St. Francis
147 Woodruff

03 Southwest

003 Ashley
011 Bradley
013 Calhoun
019 Clark
025 Cleveland
027 Columbia
039 Dallas
043 Drew
053 Grant
057 Hempstead
059 Hot Spring
061 Howard
073 Lafayette
081 Little River
091 Miller
099 Nevada
103 Ouachita
109 Pike
133 Sevier
139 Union

04 Ouachita

051 Garland
083 Logan
097 Montgomery
105 Perry
113 Polk
119 Pulaski
125 Saline
127 Scott
131 Sebastian
149 Yell

05 Ozark

005 Baxter
007 Benton
009 Boone
015 Carroll
023 Cleburne
029 Conway
033 Crawford
045 Faulkner
047 Franklin
049 Fulton
063 Independence
065 IZard
071 Johnson
087 Madison
089 Marion
101 Newton
115 Pope
121 Randolph
129 Searcy
135 Sharp
137 Stone
141 Van Buren
143 Washington
145 White

06 California**01 North Coast**

015 Del Norte
023 Humboldt
045 Mendocino
097 Sonoma

02 North Interior

035 Lassen
049 Modoc
089 Shasta
093 Siskiyou
105 Trinity

03 Sacramento

007 Butte
011 Colusa
017 El Dorado
021 Glenn
033 Lake
055 Napa
057 Nevada
061 Placer

063 Plumas

067 Sacramento

091 Sierra

101 Sutter

103 Tehama

113 Yolo

115 Yuba

04 Central Coast

001 Alameda
013 Contra Costa
041 Marin
053 Monterey
069 San Benito
075 San Francisco
079 San Luis Obispo
081 San Mateo
083 Santa Barbara
085 Santa Clara
087 Santa Cruz
095 Solano
111 Ventura

05 San Joaquin

003 Alpine
005 Amador
009 Calaveras
019 Fresno
029 Kern
031 Kings
039 Madera
043 Mariposa
047 Merced
051 Mono
077 San Joaquin
099 Stanislaus
107 Tulare
109 Tuolumne

06 Southern

025 Imperial
027 Inyo
037 Los Angeles
059 Orange
065 Riverside
071 San Bernardino
073 San Diego

08	Colorado
01	Northern Front Range
013	Boulder
019	Clear Creek
035	Douglas
039	Elbert
041	El Paso
047	Gilpin
059	Jefferson
065	Lake
069	Larimer
093	Park
119	Teller
02	Southern Front Range
015	Chaffee
023	Costilla
027	Custer
043	Fremont
055	Huerfano
071	Las Animas
101	Pueblo
03	West Central
003	Alamosa
021	Conejos
037	Eagle
049	Grand
051	Gunnison
053	Hinsdale
057	Jackson
079	Mineral
097	Pitkin
105	Rio Grande
107	Routt
109	Saguache
111	San Juan
117	Summit
04	Western
007	Archuleta
029	Delta
033	Dolores
045	Garfield
067	La Plata
077	Mesa
081	Moffat
083	Montezuma
085	Montrose
091	Ouray

103	Rio Blanco
113	San Miguel
05	Eastern
001	Adams
005	Arapahoe
009	Baca
011	Bent
017	Cheyenne
025	Crowley
031	Denver
061	Kiowa
063	Kit Carson
073	Lincoln
075	Logan
087	Morgan
089	Otero
095	Phillips
099	Prowers
115	Sedgwick
121	Washington
123	Weld
125	Yuma

09	Connecticut
01	State
001	Fairfield
003	Hartford
005	Litchfield
007	Middlesex
009	New Haven
011	New London
013	Tolland
015	Windham

10	Delaware
01	State
001	Kent
003	New Castle
005	Sussex

11 District of Columbia

12	Florida
01	Northeastern
001	Alachua
003	Baker
007	Bradford
019	Clay
023	Columbia
029	Dixie
031	Duval
035	Flagler
041	Gilchrist
047	Hamilton
067	Lafayette
075	Levy
079	Madison
083	Marion
089	Nassau
107	Putnam
109	St. Johns
121	Suwannee
123	Taylor
125	Union
127	Volusia

02	Northwestern
005	Bay
013	Calhoun
033	Escambia
037	Franklin
039	Gadsden
045	Gulf
059	Holmes
063	Jackson
065	Jefferson
073	Leon
077	Liberty
091	Okaloosa
113	Santa Rosa
129	Wakulla
131	Walton
133	Washington

03	Central
009	Brevard
017	Citrus
027	DeSoto
049	Hardee
053	Hernando
055	Highlands
057	Hillsborough

061 Indian River
069 Lake
081 Manatee
093 Okeechobee
095 Orange
097 Osceola
101 Pasco
103 Pinellas
105 Polk
111 St. Lucie
115 Sarasota
117 Seminole
119 Sumter

04 Southern

011 Broward
015 Charlotte
021 Collier
025 Dade
043 Glades
051 Hendry
071 Lee
085 Martin
087 Monroe
099 Palm Beach

13 Georgia

01 Southeastern
001 Appling
003 Atkinson
005 Bacon
025 Brantley
029 Bryan
031 Bulloch
039 Camden
043 Candler
049 Charlton
051 Chatham
065 Clinch
069 Coffee
091 Dodge
101 Echols
103 Effingham
107 Emanuel
109 Evans
127 Glynn
161 Jeff Davis
165 Jenkins
167 Johnson

175 Laurens
179 Liberty
183 Long
191 McIntosh
209 Montgomery
229 Pierce
251 Screven
267 Tattnall
271 Telfair
279 Toombs
283 Treutlen
299 Ware
305 Wayne
309 Wheeler

02 Southwestern

007 Baker
017 Ben Hill
019 Berrien
027 Brooks
071 Colquitt
075 Cook
081 Crisp
087 Decatur
093 Dooley
099 Early
131 Grady
155 Irwin
173 Lanier
185 Lowndes
201 Miller
205 Mitchell
253 Seminole
275 Thomas
277 Tift
287 Turner
315 Wilcox
321 Worth

03 Central

009 Baldwin
021 Bibb
023 Bleckley
033 Burke
035 Butts
037 Calhoun
053 Chattahoochee
061 Clay
073 Columbia
079 Crawford

095 Dougherty
125 Glascock
133 Greene
141 Hancock
145 Harris
153 Houston
159 Jasper
163 Jefferson
169 Jones
171 Lamar
177 Lee
181 Lincoln
189 McDuffie
193 Macon
197 Marion
207 Monroe
211 Morgan
215 Muscogee
225 Peach
231 Pike
235 Pulaski
237 Putnam
239 Quitman
243 Randolph
245 Richmond
249 Schley
259 Stewart
261 Sumter
263 Talbot
265 Taliaferro
269 Taylor
273 Terrell
289 Twiggs
293 Upson
301 Warren
303 Washington
307 Webster
317 Wilkes
319 Wilkinson

04 North Central

011 Banks
013 Barrow
045 Carroll
059 Clarke
063 Clayton
067 Cobb
077 Coweta
089 DeKalb
097 Douglas

105 Elbert
 113 Fayette
 117 Forsyth
 119 Franklin
 121 Fulton
 135 Gwinnett
 139 Hall
 143 Haralson
 147 Hart
 149 Heard
 151 Henry
 157 Jackson
 195 Madison
 199 Meriwether
 217 Newton
 219 Oconee
 221 Oglethorpe
 223 Paulding
 233 Polk
 247 Rockdale
 255 Spalding
 285 Troup
 297 Walton

05 Northern
 015 Bartow
 047 Catoosa
 055 Chattooga
 057 Cherokee
 083 Dade
 085 Dawson
 111 Fannin
 115 Floyd
 123 Gilmer
 129 Gordon
 137 Habersham
 187 Lumpkin
 213 Murray
 227 Pickens
 241 Rabun
 257 Stephens
 281 Towns
 291 Union
 295 Walker
 311 White
 313 Whitfield

15 Hawaii
01 State
 001 Hawaii
 003 Honolulu
 005 Kalawao
 007 Kauai
 009 Maui

16 Idaho
01 Northern
 009 Benewah
 017 Bonner
 021 Boundary
 035 Clearwater
 049 Idaho
 055 Kootenai
 057 Latah
 061 Lewis
 069 Nez Perce
 079 Shoshone

02 Southeastern
 001 Ada
 003 Adams
 015 Boise
 027 Canyon
 039 Elmore
 045 Gem
 073 Owyhee
 075 Payette
 085 Valley
 087 Washington

03 Southwestern
 005 Bannock
 007 Bear Lake
 011 Bingham
 013 Blaine
 019 Bonneville
 023 Butte
 025 Camas
 029 Caribou
 031 Cassia
 033 Clark
 037 Custer
 041 Franklin
 043 Fremont
 047 Gooding
 051 Jefferson

053 Jerome
 059 Lemhi
 063 Lincoln
 065 Madison
 067 Minidoka
 071 Oneida
 077 Power
 081 Teton
 083 Twin Falls

17 Illinois
01 Southern
 003 Alexander
 055 Franklin
 059 Gallatin
 065 Hamilton
 069 Hardin
 077 Jackson
 087 Johnson
 127 Massac
 145 Perry
 151 Pope
 153 Pulaski
 157 Randolph
 165 Saline
 181 Union
 193 White
 199 Williamson

02 Claypan
 005 Bond
 013 Calhoun
 023 Clark
 025 Clay
 027 Clinton
 033 Crawford
 035 Cumberland
 047 Edwards
 049 Effingham
 051 Fayette
 061 Greene
 079 Jasper
 081 Jefferson
 083 Jersey
 101 Lawrence
 117 Macoupin
 119 Madison
 121 Marion
 133 Monroe

135 Montgomery
159 Richland
163 St. Clair
173 Shelby
185 Wabash
189 Washington
191 Wayne

03 Prairie

001 Adams
007 Boone
009 Brown
011 Bureau
015 Carroll
017 Cass
019 Champaign
021 Christian
029 Coles
031 Cook
037 DeKalb
039 De Witt
041 Douglas
043 DuPage
045 Edgar
053 Ford
057 Fulton
063 Grundy
067 Hancock
071 Henderson
073 Henry
075 Iroquois
085 Jo Daviess
089 Kane
091 Kankakee
093 Kendall
095 Knox
097 Lake
099 La Salle
103 Lee
105 Livingston
107 Logan
109 McDonough
111 McHenry
113 McLean
115 Macon
123 Marshall
125 Mason
129 Menard
131 Mercer
137 Morgan

139 Moultrie
141 Ogle
143 Peoria
147 Piatt
149 Pike
155 Putnam
161 Rock Island
167 Sangamon
169 Schuyler
171 Scott
175 Stark
177 Stephenson
179 Tazewell
183 Vermilion
187 Warren
195 Whiteside
197 Will
201 Winnebago
203 Woodford

18 Indiana

01 Lower Wabash

021 Clay
027 Daviess
051 Gibson
055 Greene
083 Knox
101 Martin
121 Parke
125 Pike
129 Posey
133 Putnam
153 Sullivan
163 Vanderburgh
165 Vermillion
167 Vigo

02 Knobs

013 Brown
019 Clark
025 Crawford
037 Dubois
043 Floyd
061 Harrison
071 Jackson
093 Lawrence
105 Monroe
109 Morgan
117 Orange

119 Owen
123 Perry
143 Scott
147 Spencer
173 Warrick
175 Washington

03 Upland Flats

029 Dearborn
041 Fayette
047 Franklin
077 Jefferson
079 Jennings
115 Ohio
137 Ripley
155 Switzerland
161 Union

04 Northern

001 Adams
003 Allen
005 Bartholomew
007 Benton
009 Blackford
011 Boone
015 Carroll
017 Cass
023 Clinton
031 Decatur
033 De Kalb
035 Delaware
039 Elkhart
045 Fountain
049 Fulton
053 Grant
057 Hamilton
059 Hancock
063 Hendricks
065 Henry
067 Howard
069 Huntington
073 Jasper
075 Jay
081 Johnson
085 Kosciusko
087 Lagrange
089 Lake
091 La Porte
095 Madison
097 Marion

099 Marshall
 103 Miami
 107 Montgomery
 111 Newton
 113 Noble
 127 Porter
 131 Pulaski
 135 Randolph
 139 Rush
 141 St. Joseph
 145 Shelby
 149 Starke
 151 Steuben
 157 Tippecanoe
 159 Tipton
 169 Wabash
 171 Warren
 177 Wayne
 179 Wells
 181 White
 183 Whitley

19 Iowa

01 Northeastern

005 Allamakee
 011 Benton
 013 Black Hawk
 017 Bremer
 019 Buchanan
 023 Butler
 031 Cedar
 037 Chickasaw
 043 Clayton
 045 Clinton
 055 Delaware
 061 Dubuque
 065 Fayette
 067 Floyd
 075 Grundy
 089 Howard
 097 Jackson
 103 Johnson
 105 Jones
 113 Linn
 131 Mitchell
 163 Scott
 171 Tama
 191 Winneshiek

02 Southeastern

007 Appanoose
 015 Boone
 039 Clarke
 049 Dallas
 051 Davis
 053 Decatur
 057 Des Moines
 077 Guthrie
 079 Hamilton
 083 Hardin
 087 Henry
 095 Iowa
 099 Jasper
 101 Jefferson
 107 Keokuk
 111 Lee
 115 Louisa
 117 Lucas
 121 Madison
 123 Mahaska
 125 Marion
 127 Marshall
 135 Monroe
 139 Muscatine
 153 Polk
 157 Poweshiek
 169 Story
 177 Van Buren
 179 Wapello
 181 Warren
 183 Washington
 185 Wayne
 187 Webster

03 Southwestern

001 Adair
 003 Adams
 009 Audubon
 027 Carroll
 029 Cass
 047 Crawford
 071 Fremont
 073 Greene
 085 Harrison
 129 Mills
 133 Monona
 137 Montgomery
 145 Page
 155 Pottawattamie

159 Ringgold

165 Shelby
 173 Taylor
 175 Union
 193 Woodbury

04 Northwestern

021 Buena Vista
 025 Calhoun
 033 Cerro Gordo
 035 Cherokee
 041 Clay
 059 Dickinson
 063 Emmet
 069 Franklin
 081 Hancock
 091 Humboldt
 093 Ida
 109 Kossuth
 119 Lyon
 141 O'Brien
 143 Osceola
 147 Palo Alto
 149 Plymouth
 151 Pocahontas
 161 Sac
 167 Sioux
 189 Winnebago
 195 Worth
 197 Wright

20 Kansas

01 Northeastern

005 Atchison
 013 Brown
 027 Clay
 041 Dickinson
 043 Doniphan
 045 Douglas
 059 Franklin
 061 Geary
 085 Jackson
 087 Jefferson
 091 Johnson
 103 Leavenworth
 117 Marshall
 121 Miami
 131 Nemaha
 139 Osage

149 Pottawatomie
 161 Riley
 177 Shawnee
 197 Wabaunsee
 201 Washington
 209 Wyandotte

02 Southeastern

001 Allen
 003 Anderson
 011 Bourbon
 015 Butler
 017 Chase
 019 Chautauqua
 021 Cherokee
 031 Coffey
 035 Cowley
 037 Crawford
 049 Elk
 073 Greenwood
 099 Labette
 107 Linn
 111 Lyon
 115 Marion
 125 Montgomery
 127 Morris
 133 Neosho
 205 Wilson
 207 Woodson

03 Western

007 Barber
 009 Barton
 023 Cheyenne
 025 Clark
 029 Cloud
 033 Comanche
 039 Decatur
 047 Edwards
 051 Ellis
 053 Ellsworth
 055 Finney
 057 Ford
 063 Gove
 065 Graham
 067 Grant
 069 Gray
 071 Greeley
 075 Hamilton
 077 Harper

079 Harvey
 081 Haskell
 083 Hodgeman
 089 Jewell
 093 Kearny
 095 Kingman
 097 Kiowa
 101 Lane
 105 Lincoln
 109 Logan
 113 McPherson
 119 Meade
 123 Mitchell
 129 Morton
 135 Ness
 137 Norton
 141 Osborne
 143 Ottawa
 145 Pawnee
 147 Phillips
 151 Pratt
 153 Rawlins
 155 Reno
 157 Republic
 159 Rice
 163 Rooks
 165 Rush
 167 Russell
 169 Saline
 171 Scott
 173 Sedgwick
 175 Seward
 179 Sheridan
 181 Sherman
 183 Smith
 185 Stafford
 187 Stanton
 189 Stevens
 191 Sumner
 193 Thomas
 195 Trego
 199 Wallace
 203 Wichita

21 Kentucky

01 Eastern

071 Floyd
 095 Harlan
 119 Knott

131 Leslie
 133 Letcher
 159 Martin
 193 Perry
 195 Pike

02 Northern Cumberland

019 Boyd
 043 Carter
 063 Elliott
 089 Greenup
 115 Johnson
 127 Lawrence
 135 Lewis
 153 Magoffin
 165 Menifee
 175 Morgan
 197 Powell
 205 Rowan
 237 Wolfe

03 Southern Cumberland

013 Bell
 025 Breathitt
 051 Clay
 065 Estill
 109 Jackson
 121 Knox
 125 Laurel
 129 Lee
 147 McCreary
 189 Owsley
 203 Rockcastle
 235 Whitley

04 Bluegrass

005 Anderson
 011 Bath
 015 Boone
 017 Bourbon
 021 Boyle
 023 Bracken
 037 Campbell
 041 Carroll
 049 Clark
 067 Fayette
 069 Fleming
 073 Franklin
 077 Gallatin
 079 Garrard

081	Grant	047	Christian	055	Lafayette
097	Harrison	055	Crittenden	057	Lafourche
103	Henry	059	Daviess	077	Pointe Coupee
111	Jefferson	061	Edmonson	089	St. Charles
113	Jessamine	101	Henderson	093	St. James
117	Kenton	107	Hopkins	095	St. John the Baptist
137	Lincoln	141	Logan	097	St. Landry
151	Madison	149	McLean	099	St. Martin
161	Mason	171	Monroe	101	St. Mary
167	Mercer	177	Muhlenberg	109	Terrebonne
173	Montgomery	183	Ohio	113	Vermilion
181	Nicholas	213	Simpson	121	West Baton Rouge
185	Oldham	219	Todd	125	West Feliciana
187	Owen	225	Union		
191	Pendleton	227	Warren		
201	Robertson	233	Webster	03 Southwest	
209	Scott			003	Allen
211	Shelby	07 Western		011	Beauregard
215	Spencer	007	Ballard	019	Calcasieu
223	Trimble	035	Calloway	039	Evangeline
229	Washington	039	Carlisle	043	Grant
239	Woodford	075	Fulton	053	Jefferson Davis
		083	Graves	059	La Salle
05 Pennyroyal		105	Hickman	069	Natchitoches
001	Adair	139	Livingston	079	Rapides
027	Breckinridge	143	Lyon	085	Sabine
029	Bullitt	145	McCracken	115	Vernon
045	Casey	157	Marshall		
053	Clinton	221	Trigg	04 Southeast	
057	Cumberland			033	East Baton Rouge
085	Grayson	22 Louisiana		037	East Feliciana
087	Green	01 North Delta		063	Livingston
091	Hancock	025	Catahoula	091	St. Helena
093	Hardin	029	Concordia	103	St. Tammany
099	Hart	035	East Carroll	105	Tangipahoa
123	Larue	041	Franklin	117	Washington
155	Marion	065	Madison		
163	Meade	067	Morehouse	05 Northwest	
169	Metcalfe	083	Richland	013	Bienville
179	Nelson	107	Tensas	015	Bossier
199	Pulaski	123	West Carroll	017	Caddo
207	Russell			021	Caldwell
217	Taylor	02 South Delta		027	Claiborne
231	Wayne	001	Acadia	031	De Soto
		005	Ascension	049	Jackson
06 Western Coalfield		007	Assumption	061	Lincoln
003	Allen	009	Avoyelles	073	Ouachita
009	Barren	045	Iberia	081	Red River
031	Butler	047	Iberville	111	Union
033	Caldwell			119	Webster
				127	Winn

Unsamped parishes

023 Cameron
051 Jefferson
071 Orleans
075 Plaquemines
087 St. Bernard

23 Maine

01 Washington
029 Washington

02 Aroostook
003 Aroostook

03 Penobscot
019 Penobscot

04 Hancock
009 Hancock

05 Piscataquis
021 Piscataquis

06 Capitol Region
011 Kennebec
013 Knox
015 Lincoln
027 Waldo

07 Somerset
025 Somerset

08 Casco Bay
001 Androscoggin
005 Cumberland
023 Sagadahoc
031 York

09 Western Maine
007 Franklin
017 Oxford

24 Maryland

02 North Central
003 Anne Arundel
005 Baltimore
011 Caroline
013 Carroll

015 Cecil
021 Frederick
025 Harford
027 Howard
029 Kent
031 Montgomery
033 Prince George's
035 Queen Anne's
041 Talbot
043 Washington
510 Baltimore city

03 Southern
009 Calvert
017 Charles
037 St. Mary's

04 Lower Eastern Shore
019 Dorchester
039 Somerset
045 Wicomico
047 Worcester

05 Western
001 Allegany
023 Garrett

25 Massachusetts

01 State
001 Barnstable
003 Berkshire
005 Bristol
007 Dukes
009 Essex
011 Franklin
013 Hampden
015 Hampshire
017 Middlesex
019 Nantucket
021 Norfolk
023 Plymouth
025 Suffolk
027 Worcester

26 Michigan

01 Eastern Upper Peninsula
003 Alger
033 Chippewa

041 Delta
095 Luce
097 Mackinac
109 Menominee
153 Schoolcraft

02 Western Upper Peninsula

013 Baraga
043 Dickinson
053 Gogebic
061 Houghton
071 Iron
083 Keweenaw
103 Marquette
131 Ontonagon

03 Northern Lower Peninsula

001 Alcona
007 Alpena
009 Antrim
011 Arenac
017 Bay
019 Benzie
029 Charlevoix
031 Cheboygan
035 Clare
039 Crawford
047 Emmet
051 Gladwin
055 Grand Traverse
069 Iosco
073 Isabella
079 Kalkaska
085 Lake
089 Leelanau
101 Manistee
105 Mason
107 Mecosta
111 Midland
113 Missaukee
119 Montmorency
123 Newaygo
127 Oceana
129 Ogemaw
133 Osceola
135 Oscoda
137 Otsego
141 Presque Isle
143 Roscommon
165 Wexford

04 Southern Lower Peninsula

005 Allegan
015 Barry
021 Berrien
023 Branch
025 Calhoun
027 Cass
037 Clinton
045 Eaton
049 Genesee
057 Gratiot
059 Hillsdale
063 Huron
065 Ingham
067 Ionia
075 Jackson
077 Kalamazoo
081 Kent
087 Lapeer
091 Lenawee
093 Livingston
099 Macomb
115 Monroe
117 Montcalm
121 Muskegon
125 Oakland
139 Ottawa
145 Saginaw
147 St. Clair
149 St. Joseph
151 Sanilac
155 Shiawassee
157 Tuscola
159 Van Buren
161 Washtenaw
163 Wayne

27 Minnesota**01 Aspen-Birch**

017 Carlton
031 Cook
071 Koochiching
075 Lake
137 St. Louis

02 Northern Pine

001 Aitkin
005 Becker
007 Beltrami

021 Cass
029 Clearwater
035 Crow Wing
057 Hubbard
061 Itasca
077 Lake of the Woods
087 Mahnommen
135 Roseau
159 Wadena

03 Central Hardwood

003 Anoka
009 Benton
019 Carver
025 Chisago
037 Dakota
041 Douglas
045 Fillmore
049 Goodhue
053 Hennepin
055 Houston
059 Isanti
065 Kanabec
079 Le Sueur
095 Mille Lacs
097 Morrison
109 Olmsted
111 Otter Tail
115 Pine
123 Ramsey
131 Rice
139 Scott
141 Sherburne
145 Stearns
153 Todd
157 Wabasha
163 Washington
169 Winona
171 Wright

04 Prairie

011 Big Stone
013 Blue Earth
015 Brown
023 Chippewa
027 Clay
033 Cottonwood
039 Dodge
043 Faribault
047 Freeborn

051 Grant
063 Jackson
067 Kandiyohi
069 Kittson
073 Lac qui Parle
081 Lincoln
083 Lyon
085 McLeod
089 Marshall
091 Martin
093 Meeker
099 Mower
101 Murray
103 Nicollet
105 Nobles
107 Norman
113 Pennington
117 Pipestone
119 Polk
121 Pope
125 Red Lake
127 Redwood
129 Renville
133 Rock
143 Sibley
147 Steele
149 Stevens
151 Swift
155 Traverse
161 Waseca
165 Watonwan
167 Wilkin
173 Yellow Medicine

28 Mississippi**01 Delta**

011 Bolivar
027 Coahoma
051 Holmes
053 Humphreys
055 Issaquena
083 Leflore
119 Quitman
125 Sharkey
133 Sunflower
135 Tallahatchie
143 Tunica
149 Warren
151 Washington
163 Yazoo

02 North
 003 Alcorn
 009 Benton
 013 Calhoun
 015 Carroll
 017 Chickasaw
 019 Choctaw
 025 Clay
 033 DeSoto
 043 Grenada
 057 Itawamba
 071 Lafayette
 081 Lee
 087 Lowndes
 093 Marshall
 095 Monroe
 097 Montgomery
 105 Oktibbeha
 107 Panola
 115 Pontotoc
 117 Prentiss
 137 Tate
 139 Tippah
 141 Tishomingo
 145 Union
 155 Webster
 161 Yalobusha

03 Central
 007 Attala
 023 Clarke
 061 Jasper
 069 Kemper
 075 Lauderdale
 079 Leake
 099 Neshoba
 101 Newton
 103 Noxubee
 121 Rankin
 123 Scott
 127 Simpson
 129 Smith
 159 Winston

04 South
 031 Covington
 035 Forrest
 039 George
 041 Greene

045 Hancock
 047 Harrison
 059 Jackson
 065 Jefferson Davis
 067 Jones
 073 Lamar
 077 Lawrence
 091 Marion
 109 Pearl River
 111 Perry
 131 Stone
 147 Walthall
 153 Wayne

05 Southwest
 001 Adams
 005 Amite
 021 Claiborne
 029 Copiah
 037 Franklin
 049 Hinds
 063 Jefferson
 085 Lincoln
 089 Madison
 113 Pike
 157 Wilkinson

29 Missouri

01 Eastern Ozarks
 017 Bollinger
 023 Butler
 035 Carter
 055 Crawford
 065 Dent
 093 Iron
 123 Madison
 149 Oregon
 179 Reynolds
 181 Ripley
 187 St. Francois
 203 Shannon
 221 Washington
 223 Wayne

02 Southwestern Ozarks
 009 Barry
 043 Christian
 067 Douglas

091 Howell
 119 McDonald
 145 Newton
 153 Ozark
 209 Stone
 213 Taney
 215 Texas
 225 Webster
 229 Wright

03 Northwestern Ozarks

015 Benton
 029 Camden
 039 Cedar
 059 Dallas
 085 Hickory
 105 Laclede
 125 Maries
 131 Miller
 141 Morgan
 161 Phelps
 167 Polk
 169 Pulaski
 185 St. Clair

04 Prairie

001 Adair
 003 Andrew
 005 Atchison
 007 Audrain
 011 Barton
 013 Bates
 021 Buchanan
 025 Caldwell
 033 Carroll
 037 Cass
 041 Chariton
 045 Clark
 047 Clay
 049 Clinton
 053 Cooper
 057 Dade
 061 Daviess
 063 DeKalb
 075 Gentry
 077 Greene
 079 Grundy
 081 Harrison
 083 Henry
 087 Holt

095	Jackson	201	Scott	03	Western
097	Jasper	207	Stoddard	039	Granite
101	Johnson	219	Warren	061	Mineral
103	Knox	510	St. Louis city	063	Missoula
107	Lafayette			081	Ravalli
109	Lawrence				
111	Lewis	30	Montana	04	West Central
113	Lincoln	01	Northwestern	007	Broadwater
115	Linn	029	Flathead	013	Cascade
117	Livingston	047	Lake	043	Jefferson
121	Macon	053	Lincoln	045	Judith Basin
127	Marion	089	Sanders	049	Lewis and Clark
129	Mercer			059	Meagher
137	Monroe	02	Eastern	077	Powell
147	Nodaway	003	Big Horn	107	Wheatland
159	Pettis	005	Blaine		
163	Pike	009	Carbon	05	Southwestern
165	Platte	011	Carter	001	Beaverhead
171	Putnam	015	Chouteau	023	Deer Lodge
173	Ralls	017	Custer	031	Gallatin
175	Randolph	019	Daniels	057	Madison
177	Ray	021	Dawson	067	Park
195	Saline	025	Fallon	093	Silver Bow
197	Schuyler	027	Fergus		
199	Scotland	033	Garfield		
205	Shelby	035	Glacier	31	Nebraska
211	Sullivan	037	Golden Valley	01	Eastern
217	Vernon	041	Hill	001	Adams
227	Worth	051	Liberty	011	Boone
		055	McCone	019	Buffalo
05	Riverborder	065	Musselshell	021	Burt
019	Boone	069	Petroleum	023	Butler
027	Callaway	071	Phillips	025	Cass
031	Cape Girardeau	073	Pondera	027	Cedar
051	Cole	075	Powder River	035	Clay
069	Dunklin	079	Prairie	037	Colfax
071	Franklin	083	Richland	039	Cuming
073	Gasconade	085	Roosevelt	041	Custer
089	Howard	087	Rosebud	043	Dakota
099	Jefferson	091	Sheridan	047	Dawson
133	Mississippi	095	Stillwater	051	Dixon
135	Moniteau	097	Sweet Grass	053	Dodge
139	Montgomery	099	Teton	055	Douglas
143	New Madrid	101	Toole	059	Fillmore
151	Osage	103	Treasure	061	Franklin
155	Pemiscot	105	Valley	063	Frontier
157	Perry	109	Wibaux	065	Furnas
183	St. Charles	111	Yellowstone	067	Gage
186	Ste. Genevieve	113	Yellowstone National Park	073	Gosper
189	St. Louis			077	Greeley

079 Hall
 081 Hamilton
 083 Harlan
 087 Hitchcock
 093 Howard
 095 Jefferson
 097 Johnson
 099 Kearney
 109 Lancaster
 119 Madison
 121 Merrick
 125 Nance
 127 Nemaha
 129 Nuckolls
 131 Otoe
 133 Pawnee
 137 Phelps
 139 Pierce
 141 Platte
 143 Polk
 145 Red Willow
 147 Richardson
 151 Saline
 153 Sarpy
 155 Saunders
 159 Seward
 163 Sherman
 167 Stanton
 169 Thayer
 173 Thurston
 175 Valley
 177 Washington
 179 Wayne
 181 Webster
 185 York

02 Western

003 Antelope
 005 Arthur
 007 Banner
 009 Blaine
 013 Box Butte
 015 Boyd
 017 Brown
 029 Chase
 031 Cherry
 033 Cheyenne
 045 Dawes
 049 Deuel
 057 Dundy

069 Garden
 071 Garfield
 075 Grant
 085 Hayes
 089 Holt
 091 Hooker
 101 Keith
 103 Keya Paha
 105 Kimball
 107 Knox
 111 Lincoln
 113 Logan
 115 Loup
 117 McPherson
 123 Morrill
 135 Perkins
 149 Rock
 157 Scotts Bluff
 161 Sheridan
 165 Sioux
 171 Thomas
 183 Wheeler

32 Nevada

01 Nevada

001 Churchill
 003 Clark
 005 Douglas
 007 Elko
 009 Esmeralda
 011 Eureka
 013 Humboldt
 015 Lander
 017 Lincoln
 019 Lyon
 021 Mineral
 023 Nye
 027 Pershing
 029 Storey
 031 Washoe
 033 White Pine
 510 Carson City

33 New Hampshire

02 Northern

003 Carroll
 007 Coos
 009 Grafton

03 Southern

001 Belknap
 005 Cheshire
 011 Hillsborough
 013 Merrimack
 015 Rockingham
 017 Strafford
 019 Sullivan

34 New Jersey

01 State

001 Atlantic
 003 Bergen
 005 Burlington
 007 Camden
 009 Cape May
 011 Cumberland
 013 Essex
 015 Gloucester
 017 Hudson
 019 Hunterdon
 021 Mercer
 023 Middlesex
 025 Monmouth
 027 Morris
 029 Ocean
 031 Passaic
 033 Salem
 035 Somerset
 037 Sussex
 039 Union
 041 Warren

35 New Mexico

01 Northwestern

001 Bernalillo
 006 Cibola
 028 Los Alamos
 031 McKinley
 039 Rio Arriba
 043 Sandoval
 045 San Juan
 049 Santa Fe
 055 Taos
 061 Valencia

02 Northeastern

007 Colfax
019 Guadalupe
021 Harding
033 Mora
037 Quay
047 San Miguel
057 Torrance
059 Union

03 Southwestern

003 Catron
013 Dona Ana
017 Grant
023 Hidalgo
029 Luna
051 Sierra
053 Socorro

04 Southeastern

005 Chaves
009 Curry
011 DeBaca
015 Eddy
025 Lea
027 Lincoln
035 Otero
041 Roosevelt

36 New York**01 Adirondack**

019 Clinton
033 Franklin
045 Jefferson

089 St. Lawrence

02 Lake Plain

011 Cayuga
029 Erie
037 Genesee
051 Livingston
053 Madison
055 Monroe
063 Niagara
067 Onondaga
069 Ontario
073 Orleans
075 Oswego

099 Seneca
117 Wayne
121 Wyoming
123 Yates

03 Western Adirondack

035 Fulton
043 Herkimer
049 Lewis
065 Oneida

04 Eastern Adirondack

031 Essex
041 Hamilton
113 Warren

05 Southwest Highlands

003 Allegany
009 Cattaraugus
013 Chautauqua
101 Steuben

06 South-Central Highlands

007 Broome
015 Chemung
017 Chenango
023 Cortland
025 Delaware
077 Otsego
097 Schuyler
107 Tioga
109 Tompkins

07 Capitol District

001 Albany
021 Columbia
057 Montgomery
083 Rensselaer
091 Saratoga
093 Schenectady
115 Washington

08 Catskill-Lower Hudson

005 Bronx
027 Dutchess
039 Greene
047 Kings
059 Nassau
061 New York
071 Orange

079 Putnam
081 Queens
085 Richmond
087 Rockland
095 Schoharie
103 Suffolk
105 Sullivan
111 Ulster
119 Westchester

37 North Carolina**01 Southern Coastal Plain**

017 Bladen
019 Brunswick
047 Columbus
051 Cumberland
061 Duplin
079 Greene
085 Harnett
093 Hoke
101 Johnston
103 Jones
105 Lee
107 Lenoir
125 Moore
129 New Hanover
133 Onslow
141 Pender
153 Richmond
155 Robeson
163 Sampson
165 Scotland
191 Wayne

02 Northern Coastal Plain

013 Beaufort
015 Bertie
029 Camden
031 Carteret
041 Chowan
049 Craven
053 Currituck
055 Dare
065 Edgecombe
073 Gates
083 Halifax
091 Hertford
095 Hyde
117 Martin
127 Nash

131 Northampton
 137 Pamlico
 139 Pasquotank
 143 Perquimans
 147 Pitt
 177 Tyrrell
 187 Washington
 195 Wilson

03 Piedmont

001 Alamance
 003 Alexander
 007 Anson
 025 Cabarrus
 033 Caswell
 035 Catawba
 037 Chatham
 045 Cleveland
 057 Davidson
 059 Davie
 063 Durham
 067 Forsyth
 069 Franklin
 071 Gaston
 077 Granville
 081 Guilford
 097 Iredell
 109 Lincoln
 119 Mecklenburg
 123 Montgomery
 135 Orange
 145 Person
 149 Polk
 151 Randolph
 157 Rockingham
 159 Rowan
 161 Rutherford
 167 Stanly
 169 Stokes
 171 Surry
 179 Union
 181 Vance
 183 Wake
 185 Warren
 197 Yadkin

04 Mountains

005 Alleghany
 009 Ashe
 011 Avery

021 Buncombe
 023 Burke
 027 Caldwell
 039 Cherokee
 043 Clay
 075 Graham
 087 Haywood
 089 Henderson
 099 Jackson
 111 McDowell
 113 Macon
 115 Madison
 121 Mitchell
 173 Swain
 175 Transylvania
 189 Watauga
 193 Wilkes
 199 Yancey

38 North Dakota

01 Eastern

001 Adams
 003 Barnes
 005 Benson
 007 Billings
 009 Bottineau
 011 Bowman
 013 Burke
 015 Burleigh
 017 Cass
 019 Cavalier
 021 Dickey
 023 Divide
 025 Dunn
 027 Eddy
 029 Emmons
 031 Foster
 033 Golden Valley
 035 Grand Forks
 037 Grant
 039 Griggs
 041 Hettinger
 043 Kidder
 045 LaMoure
 047 Logan
 049 McHenry
 051 McIntosh
 053 McKenzie
 055 McLean

057 Mercer
 059 Morton
 061 Mountrail
 063 Nelson
 065 Oliver
 067 Pembina
 069 Pierce
 071 Ramsey
 073 Ransom
 075 Renville
 077 Richland
 079 Rolette
 081 Sargent
 083 Sheridan
 085 Sioux
 087 Slope
 089 Stark
 091 Steele
 093 Stutsman
 095 Towner
 097 Traill
 099 Walsh
 101 Ward
 103 Wells
 105 Williams

39 Ohio

01 South-Central

001 Adams
 015 Brown
 025 Clermont
 053 Gallia
 071 Highland
 079 Jackson
 087 Lawrence
 131 Pike
 141 Ross
 145 Scioto

02 Southeastern

009 Athens
 073 Hocking
 105 Meigs
 115 Morgan
 127 Perry
 163 Vinton
 167 Washington

03 East-Central

013 Belmont
019 Carroll
031 Coshocton
059 Guernsey
067 Harrison
075 Holmes
081 Jefferson
111 Monroe
119 Muskingum
121 Noble
157 Tuscarawas

04 Northeastern

005 Ashland
007 Ashtabula
029 Columbiana
035 Cuyahoga
043 Erie
055 Geauga
077 Huron
085 Lake
093 Lorain
099 Mahoning
103 Medina
133 Portage
139 Richland
151 Stark
153 Summit
155 Trumbull
169 Wayne

05 Southwestern

017 Butler
023 Clark
027 Clinton
037 Darke
045 Fairfield
047 Fayette
049 Franklin
057 Greene
061 Hamilton
089 Licking
097 Madison
109 Miami
113 Montgomery
129 Pickaway
135 Preble
165 Warren

06 Northwestern

003 Allen
011 Auglaize
021 Champaign
033 Crawford
039 Defiance
041 Delaware
051 Fulton
063 Hancock
065 Hardin
069 Henry
083 Knox
091 Logan
095 Lucas
101 Marion
107 Mercer
117 Morrow
123 Ottawa
125 Paulding
137 Putnam
143 Sandusky
147 Seneca
149 Shelby
159 Union
161 Van Wert
171 Williams
173 Wood
175 Wyandot

40 Oklahoma**01 Southeast**

005 Atoka
013 Bryan
023 Choctaw
029 Coal
061 Haskell
077 Latimer
079 Le Flore
089 McCurtain
121 Pittsburg
127 Pushmataha

02 Northeast

001 Adair
021 Cherokee
041 Delaware
091 McIntosh
097 Mayes
101 Muskogee

115 Ottawa
135 Sequoyah

Unsampled counties

003 Alfalfa
007 Beaver
009 Beckham
011 Blaine
015 Caddo
017 Canadian
019 Carter
025 Cimarron
027 Cleveland
031 Comanche
033 Cotton
035 Craig
037 Creek
039 Custer
043 Dewey
045 Ellis
047 Garfield
049 Garvin
051 Grady
053 Grant
055 Greer
057 Harmon
059 Harper
063 Hughes
065 Jackson
067 Jefferson
069 Johnston
071 Kay
073 Kingfisher
075 Kiowa
081 Lincoln
083 Logan
085 Love
087 McClain
093 Major
095 Marshall
099 Murray
103 Noble
105 Nowata
107 Okfuskee
109 Oklahoma
111 Okmulgee
113 Osage
117 Pawnee
119 Payne
123 Pontotoc

125 Pottawatomie
129 Roger Mills
131 Rogers
133 Seminole
137 Stephens
139 Texas
141 Tillman
143 Tulsa
145 Wagoner
147 Washington
149 Washita
151 Woods
153 Woodward

41 Oregon

00 Northwest

005 Clackamas
007 Clatsop
009 Columbia
027 Hood River
047 Marion
051 Multnomah
053 Polk
057 Tillamook
067 Washington
071 Yamhill

01 West Central

003 Benton
039 Lane
041 Lincoln
043 Linn

02 Southwest

011 Coos
015 Curry
019 Douglas
029 Jackson
033 Josephine

03 Central

013 Crook
017 Deschutes
021 Gilliam
031 Jefferson
035 Klamath
037 Lake
055 Sherman
065 Wasco
069 Wheeler

04 Blue Mountains

001 Baker
023 Grant
025 Harney
045 Malheur
049 Morrow
059 Umatilla
061 Union
063 Wallowa

42 Pennsylvania

00 South Central

043 Dauphin
055 Franklin
057 Fulton
061 Huntingdon
067 Juniata
087 Mifflin
099 Perry
109 Snyder
119 Union

05 Western

003 Allegheny
005 Armstrong
007 Beaver
019 Butler
039 Crawford
049 Erie
059 Greene
063 Indiana
073 Lawrence
085 Mercer
125 Washington
129 Westmoreland

06 North Central/Allegheny

023 Cameron
027 Centre
031 Clarion
033 Clearfield
035 Clinton
047 Elk
053 Forest
065 Jefferson
081 Lycoming
083 Mc Kean
105 Potter
113 Sullivan

117 Tioga
121 Venango
123 Warren

07 Southwestern

009 Bedford
013 Blair
021 Cambria
051 Fayette
111 Somerset

08 Northeastern/Pocono

015 Bradford
025 Carbon
037 Columbia
069 Lackawanna
079 Luzerne
089 Monroe
093 Montour
097 Northumberland
103 Pike
107 Schuylkill
115 Susquehanna
127 Wayne
131 Wyoming

09 Southeastern

001 Adams
011 Berks
017 Bucks
029 Chester
041 Cumberland
045 Delaware
071 Lancaster
075 Lebanon
077 Lehigh
091 Montgomery
095 Northampton
101 Philadelphia
133 York

44 Rhode Island

01 State

001 Bristol
003 Kent
005 Newport
007 Providence
009 Washington

45 South Carolina

01 Southern Coastal Plain

003 Aiken
005 Allendale
009 Bamberg
011 Barnwell
013 Beaufort
017 Calhoun
029 Colleton
035 Dorchester
049 Hampton
053 Jasper
063 Lexington
075 Orangeburg

02 Northern Coastal Plain

015 Berkeley
019 Charleston
025 Chesterfield
027 Clarendon
031 Darlington
033 Dillon
041 Florence
043 Georgetown
051 Horry
055 Kershaw
061 Lee
067 Marion
069 Marlboro
079 Richland
085 Sumter
089 Williamsburg

03 Piedmont

001 Abbeville
007 Anderson
021 Cherokee
023 Chester
037 Edgefield
039 Fairfield
045 Greenville
047 Greenwood
057 Lancaster
059 Laurens
065 McCormick
071 Newberry
073 Oconee
077 Pickens
081 Saluda
083 Spartanburg

087 Union

091 York

46 South Dakota

01 Eastern

003 Aurora
005 Beadle
007 Bennett
009 Bon Homme
011 Brookings
013 Brown
015 Brule
017 Buffalo
021 Campbell
023 Charles Mix
025 Clark
027 Clay
029 Codington
031 Corson
035 Davison
037 Day
039 Deuel
041 Dewey
043 Douglas
045 Edmunds
049 Faulk

051 Grant

053 Gregory

055 Haakon

057 Hamlin

059 Hand

061 Hanson

065 Hughes

067 Hutchinson

069 Hyde

071 Jackson

073 Jerauld

075 Jones

077 Kingsbury

079 Lake

083 Lincoln

085 Lyman

087 McCook

089 McPherson

091 Marshall

095 Mellette

097 Miner

099 Minnehaha

101 Moody

105 Perkins

107 Potter

109 Roberts

111 Sanborn

115 Spink

117 Stanley

119 Sully

121 Todd

123 Tripp

125 Turner

127 Union

129 Walworth

135 Yankton

137 Ziebach

02 Western

019 Butte

033 Custer

047 Fall River

063 Harding

081 Lawrence

093 Meade

103 Pennington

113 Shannon

47 Tennessee

01 West

017 Carroll

023 Chester

033 Crockett

045 Dyer

047 Fayette

053 Gibson

069 Hardeman

075 Haywood

077 Henderson

079 Henry

095 Lake

097 Lauderdale

109 McNairy

113 Madison

131 Obion

157 Shelby

167 Tipton

183 Weakley

02 West Central

005 Benton

039 Decatur

071 Hardin
081 Hickman
083 Houston
085 Humphreys
099 Lawrence
101 Lewis
135 Perry
161 Stewart
181 Wayne

03 Central

003 Bedford
015 Cannon
021 Cheatham
027 Clay
031 Coffee
037 Davidson
041 DeKalb
043 Dickson
055 Giles
087 Jackson
103 Lincoln
111 Macon
117 Marshall
119 Maury
125 Montgomery
127 Moore
147 Robertson
149 Rutherford
159 Smith
165 Sumner
169 Trousdale
187 Williamson
189 Wilson

04 Plateau

007 Bledsoe
013 Campbell
035 Cumberland
049 Fentress
051 Franklin
061 Grundy
115 Marion
129 Morgan
133 Overton
137 Pickett
141 Putnam
151 Scott
153 Sequatchie
175 Van Buren

177 Warren
185 White

05 East
001 Anderson
009 Blount
011 Bradley
019 Carter
025 Claiborne
029 Cocke

057 Grainger
059 Greene
063 Hamblen
065 Hamilton
067 Hancock
073 Hawkins
089 Jefferson
091 Johnson
093 Knox
105 Loudon
107 McMinn
121 Meigs
123 Monroe
139 Polk
143 Rhea
145 Roane
155 Sevier
163 Sullivan
171 Unicoi
173 Union
179 Washington

48 Texas

01 Southeast

005 Angelina
071 Chambers
185 Grimes
199 Hardin
201 Harris
225 Houston
241 Jasper
245 Jefferson
289 Leon
291 Liberty
313 Madison
339 Montgomery
351 Newton
361 Orange

373 Polk
403 Sabine
405 San Augustine
407 San Jacinto
455 Trinity
457 Tyler
471 Walker
473 Waller

02 Northeast

001 Anderson
037 Bowie
063 Camp
067 Cass
073 Cherokee
159 Franklin
183 Gregg
203 Harrison
213 Henderson
315 Marion
343 Morris
347 Nacogdoches
365 Panola
387 Red River
401 Rusk
419 Shelby
423 Smith
449 Titus
459 Upshur
467 Van Zandt
499 Wood

Unsampled counties

003 Andrews
007 Aransas
009 Archer
011 Armstrong
013 Atascosa
015 Austin
017 Bailey
019 Bandera
021 Bastrop
023 Baylor
025 Bee
027 Bell
029 Bexar
031 Blanco
033 Borden
035 Bosque
039 Brazoria

041	Brazos	149	Fayette	269	King
043	Brewster	151	Fisher	271	Kinney
045	Briscoe	153	Floyd	273	Kleberg
047	Brooks	155	Foard	275	Knox
049	Brown	157	Fort Bend	277	Lamar
051	Burleson	161	Freestone	279	Lamb
053	Burnet	163	Frio	281	Lampasas
055	Caldwell	165	Gaines	283	La Salle
057	Calhoun	167	Galveston	285	Lavaca
059	Callahan	169	Garza	287	Lee
061	Cameron	171	Gillespie	293	Limestone
065	Carson	173	Glasscock	295	Lipscomb
069	Castro	175	Goliad	297	Live Oak
075	Childress	177	Gonzales	299	Llano
077	Clay	179	Gray	301	Loving
079	Cochran	181	Grayson	303	Lubbock
081	Coke	187	Guadalupe	305	Lynn
083	Coleman	189	Hale	307	McCulloch
085	Collin	191	Hall	309	McLennan
087	Collingsworth	193	Hamilton	311	McMullen
089	Colorado	195	Hansford	317	Martin
091	Comal	197	Hardeman	319	Mason
093	Comanche	205	Hartley	321	Matagorda
095	Concho	207	Haskell	323	Maverick
097	Cooke	209	Hays	325	Medina
099	Coryell	211	Hemphill	327	Menard
101	Cottle	215	Hidalgo	329	Midland
103	Crane	217	Hill	331	Milam
105	Crockett	219	Hockley	333	Mills
107	Crosby	221	Hood	335	Mitchell
109	Culberson	223	Hopkins	337	Montague
111	Dallam	227	Howard	341	Moore
113	Dallas	229	Hudspeth	345	Motley
115	Dawson	231	Hunt	349	Navarro
117	Deaf Smith	233	Hutchinson	353	Nolan
119	Delta	235	Irion	355	Nueces
121	Denton	237	Jack	357	Ochiltree
123	DeWitt	239	Jackson	359	Oldham
125	Dickens	243	Jeff Davis	363	Palo Pinto
127	Dimmit	247	Jim Hogg	367	Parker
129	Donley	249	Jim Wells	369	Parmer
131	Duval	251	Johnson	371	Pecos
133	Eastland	253	Jones	375	Potter
135	Ector	255	Karnes	377	Presidio
137	Edwards	257	Kaufman	379	Rains
139	Ellis	259	Kendall	381	Randall
141	El Paso	261	Kenedy	383	Reagan
143	Erath	263	Kent	385	Real
145	Falls	265	Kerr	389	Reeves
147	Fannin	267	Kimble	391	Refugio

393 Roberts
 395 Robertson
 397 Rockwall
 399 Runnels
 409 San Patricio
 411 San Saba
 413 Schleicher
 415 Scurry
 417 Shackelford
 421 Sherman
 425 Somervell
 427 Starr
 429 Stephens
 431 Sterling
 433 Stonewall
 435 Sutton
 437 Swisher
 439 Tarrant
 441 Taylor
 443 Terrell
 445 Terry
 447 Throckmorton
 451 Tom Green
 453 Travis
 461 Upton
 463 Uvalde
 465 Val Verde
 469 Victoria
 475 Ward
 477 Washington
 479 Webb
 481 Wharton
 483 Wheeler
 485 Wichita
 487 Wilbarger
 489 Willacy
 491 Williamson
 493 Wilson
 495 Winkler
 497 Wise
 501 Yoakum
 503 Young
 505 Zapata
 507 Zavala

49 Utah

01 Northern
 003 Box Elder
 005 Cache

011 Davis
 029 Morgan
 033 Rich
 035 Salt Lake
 043 Summit
 045 Tooele
 049 Utah
 051 Wasatch
 057 Weber

02 Uinta

009 Daggett
 013 Duchesne
 047 Uintah

03 Central

023 Juab
 027 Millard
 031 Piute
 039 Sanpete
 041 Sevier
 055 Wayne

04 Eastern

007 Carbon
 015 Emery
 019 Grand
 037 San Juan

05 Southwestern

001 Beaver
 017 Garfield
 021 Iron
 025 Kane
 053 Washington

50 Vermont

02 Northern

005 Caledonia
 009 Essex
 011 Franklin
 013 Grand Isle
 015 Lamoille
 017 Orange
 019 Orleans
 023 Washington

003 Southern

001 Addison

003 Bennington
 007 Chittenden
 021 Rutland
 025 Windham
 027 Windsor

51 Virginia

01 Coastal Plain

001 Accomack
 025 Brunswick
 033 Caroline
 036 Charles City
 041 Chesterfield
 053 Dinwiddie
 057 Essex
 073 Gloucester
 081 Greensville
 085 Hanover
 087 Henrico
 093 Isle of Wight
 095 James City
 097 King and Queen
 099 King George
 101 King William
 103 Lancaster
 115 Mathews
 119 Middlesex
 127 New Kent
 131 Northampton
 133 Northumberland
 149 Prince George
 159 Richmond
 175 Southampton
 181 Surry
 183 Sussex
 193 Westmoreland
 199 York
 550 Chesapeake city
 650 Hampton city
 700 Newport News city
 800 Suffolk city
 810 Virginia Beach city

02 Southern Piedmont

007 Amelia
 011 Appomattox
 019 Bedford
 029 Buckingham
 031 Campbell
 037 Charlotte

049 Cumberland
067 Franklin
083 Halifax
089 Henry
111 Lunenburg
117 Mecklenburg
135 Nottoway
141 Patrick
143 Pittsylvania
145 Powhatan
147 Prince Edward

03 Northern Piedmont

003 Albemarle
009 Amherst
013 Arlington
047 Culpeper
059 Fairfax
061 Fauquier
065 Fluvanna
075 Goochland
079 Greene
107 Loudoun
109 Louisa
113 Madison
125 Nelson
137 Orange
153 Prince William
157 Rappahannock
177 Spotsylvania
179 Stafford

04 Northern Mountains

005 Alleghany
015 Augusta
017 Bath
023 Botetourt
043 Clarke
045 Craig
069 Frederick
091 Highland
139 Page
161 Roanoke
163 Rockbridge
165 Rockingham
171 Shenandoah
187 Warren

05 Southern Mountains

021 Bland

027 Buchanan
035 Carroll
051 Dickenson
063 Floyd
071 Giles
077 Grayson
105 Lee
121 Montgomery
155 Pulaski
167 Russell
169 Scott
173 Smyth
185 Tazewell
191 Washington
195 Wise
197 Wythe

Unsamed cities

510 Alexandria city
515 Bedford city
520 Bristol city
530 Buena Vista city
540 Charlottesville city
560 Clifton Forge city
570 Colonial Heights city
580 Covington city
590 Danville city
595 Emporia city
600 Fairfax city
610 Falls Church city
620 Franklin city
630 Fredericksburg city
640 Galax city
660 Harrisonburg city
670 Hopewell city
678 Lexington city
680 Lynchburg city
683 Manassas city
685 Manassas Park city
690 Martinsville city
710 Norfolk city
720 Norton city
730 Petersburg city
735 Poquoson city
740 Portsmouth city
750 Radford city
760 Richmond city
770 Roanoke city
775 Salem city
780 South Boston city

790 Staunton city
820 Waynesboro city
830 Williamsburg city
840 Winchester city

53 Washington

05 Puget Sound

029 Island
033 King
035 Kitsap
053 Pierce
055 San Juan
057 Skagit
061 Snohomish
073 Whatcom

06 Olympic Peninsula

009 Clallam
027 Grays Harbor
031 Jefferson
045 Mason
067 Thurston

07 Southwest

011 Clark
015 Cowlitz
041 Lewis
049 Pacific
059 Skamania
069 Wahkiakum

08 Central

001 Adams
003 Asotin
005 Benton
013 Columbia
019 Ferry
021 Franklin
023 Garfield
025 Grant
043 Lincoln
051 Pend Oreille
063 Spokane
065 Stevens
071 Walla Walla
075 Whitman

09 Inland Empire

007 Chelan

017 Douglas
037 Kittitas
039 Klickitat
047 Okanogan
077 Yakima

54 West Virginia

02 Northeastern

001 Barbour
003 Berkeley
007 Braxton
023 Grant
027 Hampshire
031 Hardy
033 Harrison
037 Jefferson
041 Lewis
057 Mineral
065 Morgan
071 Pendleton
075 Pocahontas
077 Preston
083 Randolph
091 Taylor
093 Tucker
097 Upshur
101 Webster

03 Southern

005 Boone
015 Clay
019 Fayette
025 Greenbrier
039 Kanawha
045 Logan
047 McDowell
055 Mercer
059 Mingo
063 Monroe
067 Nicholas
081 Raleigh
089 Summers
109 Wyoming

04 Northwestern

009 Brooke
011 Cabell
013 Calhoun
017 Doddridge
021 Gilmer

029 Hancock
035 Jackson
043 Lincoln
049 Marion
051 Marshall
053 Mason
061 Monongalia
069 Ohio
073 Pleasants
079 Putnam
085 Ritchie
087 Roane
095 Tyler
099 Wayne
103 Wetzel
105 Wirt
107 Wood

55 Wisconsin

01 Northeastern

037 Florence
041 Forest
067 Langlade
069 Lincoln
075 Marinette
078 Menominee
083 Oconto
085 Oneida
115 Shawano
125 Vilas

02 Northwestern

003 Ashland
005 Barron
007 Bayfield
013 Burnett
031 Douglas
051 Iron
095 Polk
099 Price
107 Rusk
113 Sawyer
119 Taylor
129 Washburn

03 Central

001 Adams
017 Chippewa
019 Clark
035 Eau Claire
053 Jackson
057 Juneau
073 Marathon
077 Marquette
081 Monroe
097 Portage
135 Waupaca
137 Waushara
141 Wood

04 Southwestern

011 Buffalo
023 Crawford
033 Dunn
043 Grant
049 Iowa
063 La Crosse
065 Lafayette
091 Pepin
093 Pierce
103 Richland
109 St. Croix
111 Sauk
121 Trempealeau
123 Vernon

05 Southeastern

009 Brown
015 Calumet
021 Columbia
025 Dane
027 Dodge
029 Door
039 Fond du Lac
045 Green
047 Green Lake
055 Jefferson
059 Kenosha
061 Kewaunee
071 Manitowoc
079 Milwaukee
087 Outagamie
089 Ozaukee
101 Racine
105 Rock

117 Sheboygan
127 Walworth
131 Washington
133 Waukesha
139 Winnebago

56 Wyoming

01 Western

013 Fremont
017 Hot Springs
023 Lincoln
029 Park
035 Sublette
037 Sweetwater
039 Teton
041 Uinta

02 Central and Southeastern

001 Albany
003 Big Horn
007 Carbon
009 Converse
015 Goshen
019 Johnson
021 Laramie
025 Natrona
027 Niobrara
031 Platte
033 Sheridan
043 Washakie

03 Northeastern

005 Campbell
011 Crook
045 Weston

72 Puerto Rico

01 Puerto Rico

001 Adjuntas
003 Aguada
005 Aguadilla
007 Aguas Buenas
009 Aibonito
011 Anasco
013 Arecibo
015 Arroyo
017 Barceloneta
019 Barranquitas

021 Bayamon
023 Cabo Rojo
025 Caguas
027 Camuy
029 Canovanas
031 Carolina
033 Catano
035 Cayey
037 Ceiba
039 Ciales
041 Cidra
043 Coamo
045 Comerio
047 Corozal
049 Culebra
051 Dorado
053 Fajardo
054 Florida
055 Guanica
057 Guayama
059 Guayanilla
061 Guaynabo
063 Gurabo
065 Hatillo
067 Hormigueros
069 Humacao
071 Isabela
073 Jayuya
075 Juana Diaz
077 Juncos
079 Lajas
081 Lares
083 Las Marias
085 Las Piedras
087 Loiza
089 Luquillo
091 Manati
093 Maricao
095 Maunabo
097 Mayaguez
099 Moca
101 Morovis
103 Naguabo
105 Naranjito
107 Orocovi
109 Patillas
111 Penuelas
113 Ponce
115 Quebradillas
117 Rincon

119 Rio Grande
121 Sabana Grande
123 Salinas
125 San German
127 San Juan
129 San Lorenzo
131 San Sebastian
133 Santa Isabel
135 Toa Alta
137 Toa Baja
139 Trujillo Alto
141 Utuado
143 Vega Alta
145 Vega Baja
147 Vieques
149 Villalba
151 Yabucoa
153 Yauco

Appendix C – Species group names and crosswalk to FIADB.

Species group name	Crosswalk from FIADB to SPDBH2002 table	Variable suffix
Longleaf and slash pines	spgrpcd=1	lgsl
Loblolly and shortleaf pines	spgrpcd=2	lbsh
Other yellow pines	spgrpcd=3	otyp
Eastern white and red pines	spgrpcd=4	ewrd
Jack pine	spgrpcd=5	jack
Spruce and balsam fir	spgrpcd=6	spfr
Eastern hemlock	spgrpcd=7	ehem
Cypress	spgrpcd=8	cypr
Other eastern softwoods	spgrpcd=9	otesw
Douglas-fir	spgrpcd=10	doug
Ponderosa and Jeffrey pines	spgrpcd=11	pdjeff
True fir	spgrpcd=12	fir
Western hemlock	spgrpcd=13	whem
Sugar pine	spgrpcd=14	sugar
Western white pine	spgrpcd=15	wwpn
Redwood	spgrpcd=16	rdwd
Sitka spruce	spgrpcd=17	sitka
Engelmann and other spruces	spgrpcd=18	engel
Western larch	spgrpcd=19	wlarch
Incense-cedar	spgrpcd=20	incen
Lodgepole pine	spgrpcd=21	lodge
Western redcedar	spgrpcd=22	wrced
Western woodland softwoods	spgrpcd=23	N/A
Other western softwoods	spgrpcd=24	otws
Select white oaks	spgrpcd=25	swok
Select red oaks	spgrpcd=26	srok
Other white oaks	spgrpcd=27	owok
Other red oaks	spgrpcd=28	orok
Hickory	spgrpcd=29	hick
Yellow birch	spgrpcd=30	ybir
Hard maple	spgrpcd=31	hmap
Soft maple	spgrpcd=32	smap
Beech	spgrpcd=33	bech
Sweetgum	spgrpcd=34	sgum
Tupelo and blackgum	spgrpcd=35	bgum
Ash	spgrpcd=36	ash

(table continued on next page)

Species group name	Crosswalk from FIADB to SPDBH2002 table	Variable suffix
Cottonwood and aspen	spgrpcd=37	ecoas
Basswood	spgrpcd=38	bass
Yellow-poplar	spgrpcd=39	ypop
Black walnut	spgrpcd=40	bwal
Black cherry	spgrpcd=41 and spcd=762	bchr
Other eastern hardwoods	spgrpcd=41,42,43 but not spcd=762	otehw
Cottonwood and aspen	spgrpcd=44	wcoas
Red alder	spgrpcd=45	alder
Oak	spgrpcd=46	wok
Other western hardwoods	spgrpcd=47,48	otwhw



Miles, Patrick D.; Vissage, John S.; Smith, W. Brad

2004. The 2002 RPA Plot Summary database users manual. Gen. Tech. Rep. NC-251. St.

Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station.
80 p.

Describes the structure of the RPA 2002 Plot Summary database and provides information on generating estimates of forest statistics from these data. The RPA 2002 Plot Summary database provides a consistent framework for storing forest inventory data across all ownerships across the entire United States. The data represents the best available data as of October 2001.

KEY WORDS: RPA, inventory, forest statistics, information management, data processing

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